CVS
SITE DEVELOPMENT PLAN
RETAIL STORE
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SHEET INDEX	
NO	DESCRIPTION
1	TITLE SHEET
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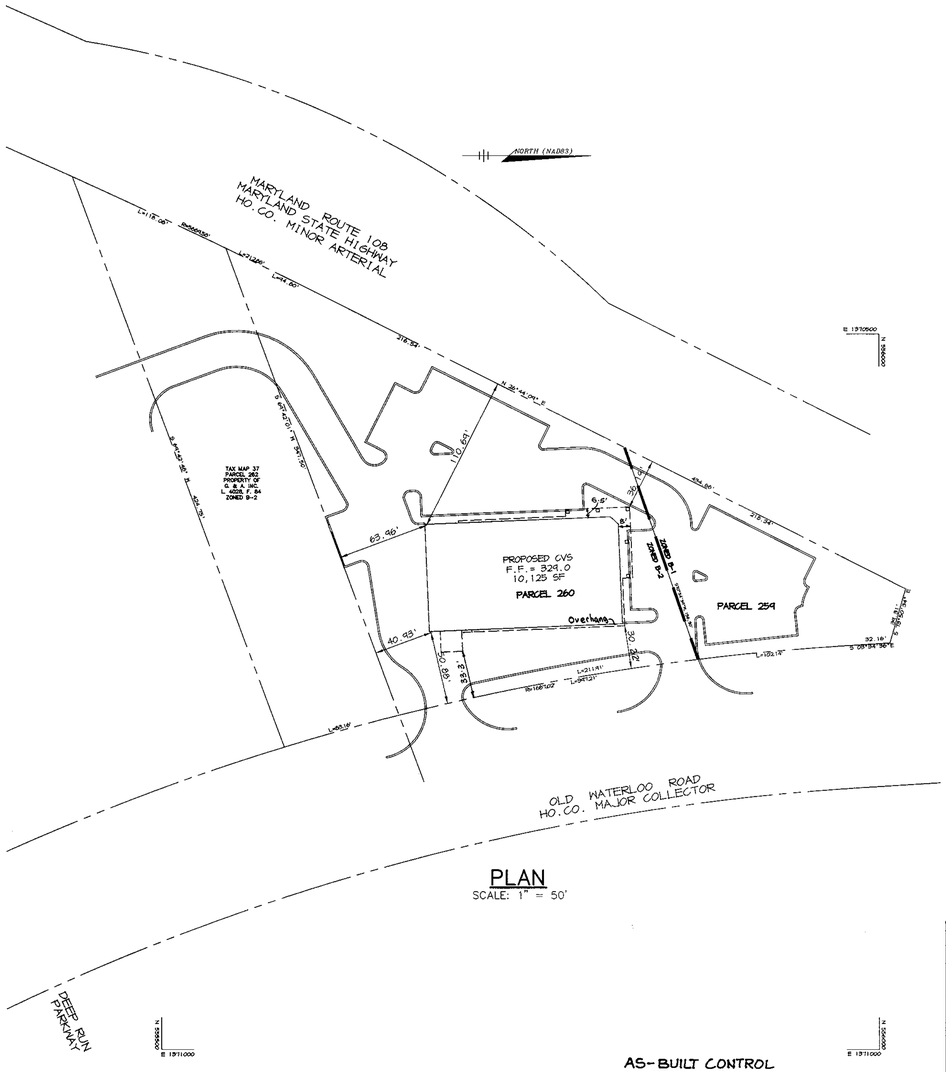
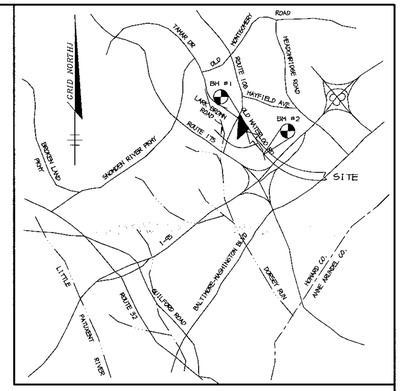
4	PROFILES AND DETAILS
5	SEDIMENT CONTROL NOTES AND DETAILS
6	SWM PROFILES AND DETAILS
7	WATER QUALITY NOTES AND DETAILS
8	LANDSCAPING PLAN

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
5. ALL PLAN DIMENSIONS ARE TO FACE OF CURB AND FACE OF BUILDING UNLESS OTHERWISE NOTED.
6. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY RIEMER MUEGGE & ASSOC. DATED AUGUST, 1997.
7. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. STATION NUMBERS 37GC AND 37HC WERE USED.
8. WATER IS PUBLIC, CONTRACT NO. 320-W.
9. SEWER IS PUBLIC. SEWER DRAINAGE AREA: DORSEY TREATMENT PLANT: DORSEY RUN PUMPING STATION CONTRACT NO. 24-3629-D.
10. STORMWATER MANAGEMENT IS PROVIDED VIA A BAYSAVER UNIT AND AN EXPANSION OF THE OFF-SITE RETENTION POND CONSTRUCTED UNDER SDP-97-106. A SHARED MAINTENANCE AGREEMENT FOR USE OF THE PRIVATE SWM FACILITY HAS BEEN RECORDED IN THE LAND RECORDS OFFICE OF HOWARD COUNTY, MD. AS LIBER NO. **4834** / FOLIO NO. **520**.
11. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
12. A 100-YEAR FLOODPLAIN STUDY IS NOT REQUIRED FOR THIS PROJECT.
13. A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
14. THE GEOTECHNICAL STUDY FOR THIS PROJECT WAS PERFORMED BY LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC. AND IS DATED JUNE 18, 1996. A SUPPLEMENTAL STORMWATER MANAGEMENT GEOTECHNICAL REPORT WAS PERFORMED BY ENGINEERING CONSULTING SERVICES DATED APRIL, 1997.
15. THE BOUNDARY SURVEY FOR THIS PROJECT WAS PERFORMED BY RIEMER MUEGGE & ASSOCIATES, INC. DATED MAY, 1997.
16. SUBJECT PROPERTY ZONED B-1 & B-2 PER 10-18-93 COMPREHENSIVE ZONING PLAN.
17. ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
18. SEE DEPARTMENT OF PLANNING AND ZONING FILE NO'S - SDP-97-106, F-98-56(FOOD LION SITE)
19. THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
20. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
21. PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
22. NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
23. ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS 'C' AS SHOWN IN FIG. 11.4, VOLUME 1 OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED.
24. ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
25. ALL PIPE ELEVATIONS SHOWN ARE INVERT ⌒ ELEVATIONS.
26. STORM DRAIN TRENCHES WITHIN ROAD RIGHT OF WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, i.e., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, LATEST AMENDMENTS.
27. PROFILES STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
28. ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T180.
29. THERE ARE NO WETLANDS ON-SITE FOR THIS PROJECT BASED ON A FIELD INSPECTION **CONDUCTED BY RMA, INC. ON MARCH, 1999.**
30. A LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE TO SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL FOR THIS SITE. SEE SHEET 8 FOR THE REQUIRED FINANCIAL SURETY.
31. A CROSS-EASEMENT TO UTILIZE THE USE-IN-COMMON ACCESS EASEMENT ACROSS PARCELS A AND B OF THE FOOD LION SITE AND PARCEL 262 HAS BEEN RECORDED IN THE LAND RECORDS OFFICE OF HOWARD COUNTY, MARYLAND, AS LIBER **1834** FOLIO **561**
32. THE FOREST CONSERVATION OBLIGATIONS INCURRED BY THIS PROJECT (0.23 ACRES OF AFFORESTATION) HAS BEEN MET BY PAYMENT OF A FEE-IN-LIEU IN THE AMOUNT OF $3005.64.
33. **DESIGN MANUAL WAIVER REQUEST DATED 3-24-99 WAIVING SECTIONS 5.2.6A, 5.2.6D-1, 5.2.6.E AND 5.2.6.F WERE APPROVED BY DEVELOPMENT ENGINEERING DIVISION ON 4-29-99 AND 6-24-99.**



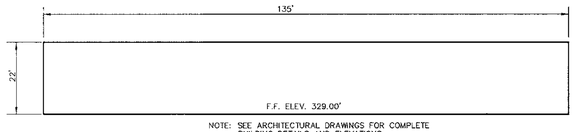
PLAN
SCALE: 1" = 50'



VICINITY MAP
SCALE: 1" = 2000'

SITE ANALYSIS

AREA OF PARCEL 259	0.328 ACRES (14,267 SF)
AREA OF PARCEL 260	1.215 ACRES (52,924 SF)
	TOTAL: 1.543 ACRES (67191 SF)
DISTURBED AREA	2.30 ACRES (100,188.00 SF)
PRESENT ZONING	B-1 & B-2
PROPOSED USE	RETAIL
BUILDING COVERAGE	10,094 SF (15.02% OF SITE)
# OF PARKING SPACES REQUIRED @ 5.0 SP/1000 SF	51 SPACES
# OF PARKING SPACES PROVIDED	52 SPACES (3 HC)
PAVED AREA	52,272 SF (77.80% OF SITE)



NOTE: SEE ARCHITECTURAL DRAWINGS FOR COMPLETE BUILDING DETAILS AND ELEVATIONS.

WEST ELEVATION - BUILDING A
NO SCALE

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
COUNTY HEALTH OFFICER — DATE 11/9/99

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DIRECTOR — DATE 11/15/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 11/4/99
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 11/12/99

DATE	NO.	REVISION
	1	

OWNER	OWNER
AUDREY OWENS ETAL 7533 GLENEAGLE DR. JESSUP, MD 20794 (410) 799-4655	OM HOSPITALITY MANAGEMENT, INC. 6251 WASHINGTON BLVD. ELKRIDGE, MD 21075 (410) 379-3095

DEVELOPER
ASTON PROPERTIES
6525 MORRISON BLVD., SUITE 300
CHARLOTTE, NC 28211
(704) 366-7331

PROJECT
CVS
RETAIL STORE

AREA
Parcels 259 & 260
Tax Map 37 Block 14, 20 Zoned B-1, B-2
6th Election District
Howard County, Maryland

TITLE
TITLE SHEET

AS-BUILT CERTIFICATE
CHRISTOPHER J. REID #19949 — DATE 9.12.00

AS-BUILT CONTROL BENCHMARKS

✓BM #1
HOCO MONUMENT 37GC
ELEV. 331.93
N 555,250.79 E 1,370,946.36

✓BM #2
HOCO MONUMENT 37HC
ELEV. 291.79
N 552,854.21 E 1,372,639.50

ADDRESS CHART

PARCEL	STREET ADDRESS
259 & 260	6480 OLD WATERLOO ROAD

SUBDIVISION NAME -			SECT./AREA -	PARCEL -
CVS PHARMACY				259 & 260
PLAT # -	BLOCK # -	ZONING -	TAX MAP NO. -	ELECT. DIST. -	CENSUS TRACT -
N/A	14 & 20	B-1 & B-2	37	6th	6067.03
WATER CODE -		SEWER CODE -		
E08		3460000		

RIEMER MUEGGE & ASSOCIATES INC
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, MD 21045
tel 410.997.8900 fax 410.997.9282

DATE
ARTHUR E. MUEGGE #8707

DESIGNED BY :	C.J.R.
DRAWN BY :	D.A.M.
PROJECT NO :	98313 SDP1.DWG
DATE :	OCTOBER 13, 1999
SCALE :	AS SHOWN
DRAWING NO.	1 OF 8

AS-BUILT 9/11/00 SDP-99-123

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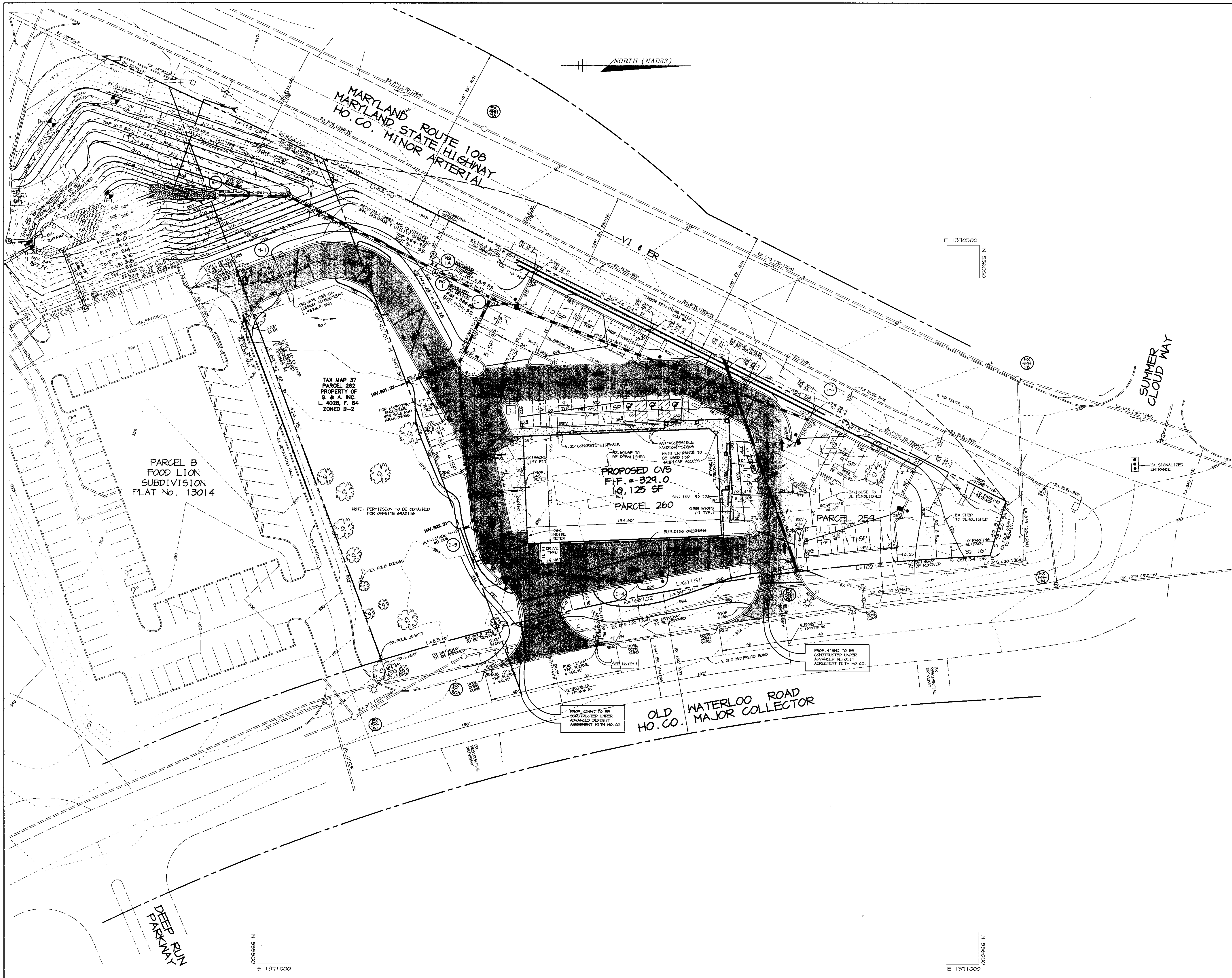

LEGEND

- P-1 PAVING
- P-3 PAVING (HEAVY DUTY PAVING)
- STREET LIGHT-SEE NOTE
- SITE LIGHT (SINGLE)-SEE NOTE

NOTES:

1. STREET LIGHTS TO BE 150 WATT VAPOR PENDANT FIXTURES MOUNTED AT 30' WITH BRONZE FIBERGLASS POLE AND 12' ARM.
   SITE LIGHTS TO BE 1000 WATT METAL HALIDE VERTICAL LAMPS ON SHOEBOXES ON 2'-6" BASE WITH 39' POLE (SINGLE, DOUBLE, OR QUAD). SEE LIGHT POLE DETAIL SHEET 4
2. **ALL OUTDOOR LIGHTING TO BE IN ACCORDANCE WITH SEC. 134 OF THE ZONING REGULATIONS SEE SHEET 4 FOR DETAIL.**
3. ALL CURB RADII ARE 5' UNLESS OTHERWISE LABELED.
4. ALL DIMENSIONS ARE TO FACE OF CURB OR BUILDING UNLESS OTHERWISE LABELED.
5. * LIMITS OF STD/REV CURB AND GUTTER.
6. SEE TITLE SHEET FOR BUILDING LOCATION DIMENSIONS.
7. WHC ABANDONMENT PROCEDURES:
   A. CONTACT BUREAU OF UTILITIES.
   B. SEVER AT CORPORATION COCK AND ENCASE IN CONCRETE AT MAIN. PROPOSED FIRE HYDRANT TO BE CONSTRUCTED UNDER ADO.
8. SHC ABANDONMENT PROCEDURES:
   A. CONTACT BUREAU OF UTILITIES.
   B. DISCONNECT SHC AND PLUG AT MAIN.
9. VI & ER = VEHICULAR INGRESS AND EGRESS RESTRICTED

AS-BUILT CERTIFICATE

CHRISTOPHER J. REID # 19949 — 9.12.00 DATE

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

COUNTY HEALTH OFFICER MR — 11/9/99 DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — 11/15/99 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 11/4/99 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 11/12/99 DATE

DATE	NO.	REVISION

OWNER	OWNER
AUDREY OWENS ETAL 7533 GLENEAGLE DR. JESSUP, MD 20794 (410) 799-4655	OM HOSPITALITY MANAGEMENT, INC. 6251 WASHINGTON BLVD. ELKRIDGE, MD 21075 (410) 379-3095

DEVELOPER
ASTON PROPERTIES
6525 MORRISON BLVD., SUITE 300
CHARLOTTE, NC 28211
(704) 366-7337

PROJECT
CVS
RETAIL STORE

AREA
Parcels 259 & 260
Tax Map 37 Block 14, 20 Zoned B-1, B-2
6th Election District
Howard County, Maryland

TITLE
SITE DEVELOPMENT PLAN

RIEMER MUEGGE & ASSOCIATES INC
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, MD 21045
tel 410.997.8900 fax 410.997.9282

DATE
ARTHUR E. MUEGGE #8707

DESIGNED BY :	C.J.R.
DRAWN BY :	D.A.M.
PROJECT NO :	98313 SDP2.DWG
DATE :	OCTOBER 13, 1999
SCALE :	1" = 30'
DRAWING NO.	2 OF 8

AS-BUILT 9/11/00 SDP-99-123

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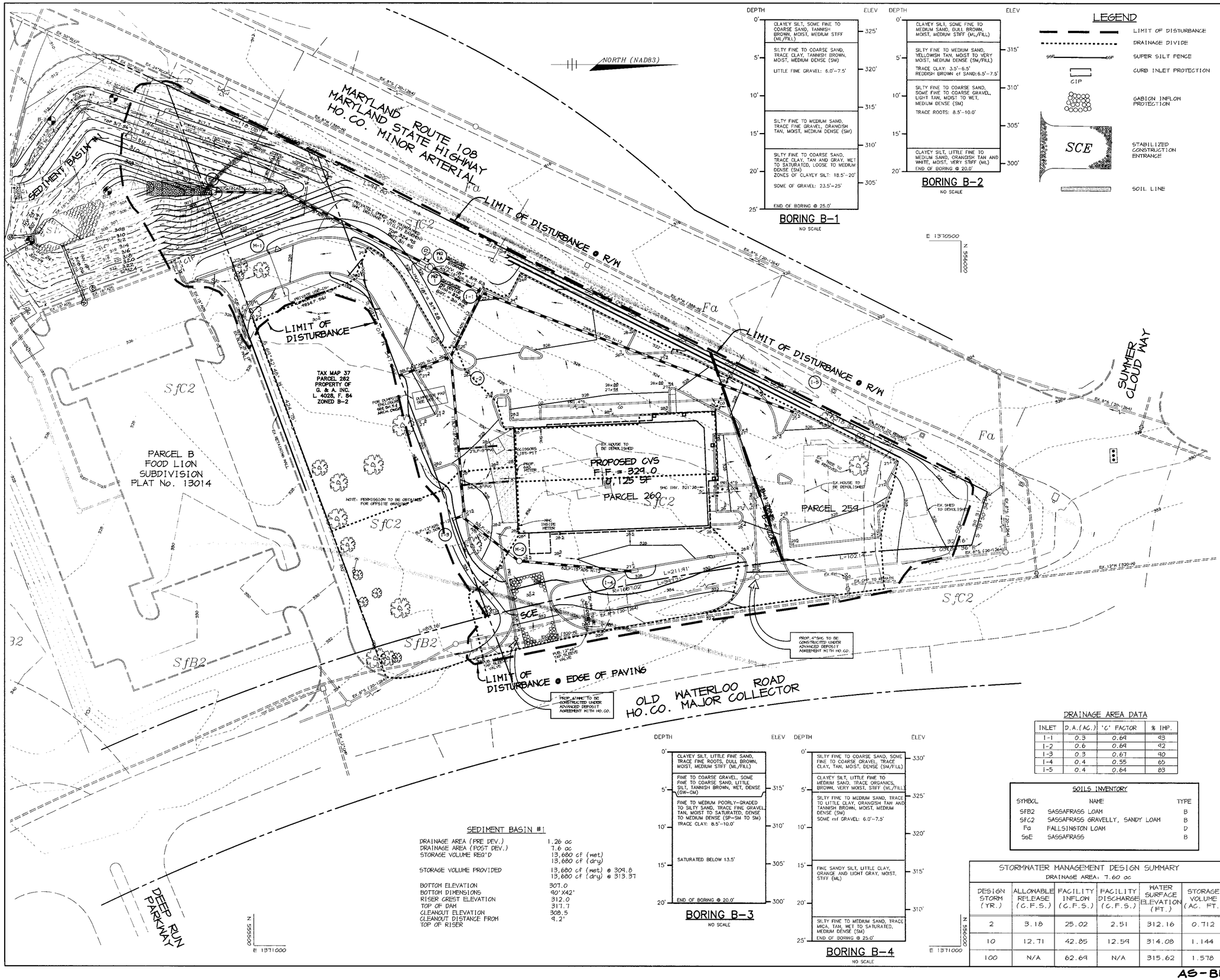

DEPTH / ELEV

DEPTH		ELEV
0'	CLAYEY SILT, SOME FINE TO COARSE SAND, TANNISH BROWN, MOIST, MEDIUM STIFF (ML/FILL)	325'
5'	SILTY FINE TO COARSE SAND, TRACE CLAY, TANNISH BROWN, MOIST, MEDIUM DENSE (SM)	320'
	LITTLE FINE GRAVEL: 6.0'–7.5'	
10'		315'
15'	SILTY FINE TO MEDIUM SAND, TRACE FINE GRAVEL, ORANGISH TAN, MOIST, MEDIUM DENSE (SM)	310'
20'	SILTY FINE TO COARSE SAND, TRACE CLAY, TAN AND GRAY, WET TO SATURATED, LOOSE TO MEDIUM DENSE (SM) ZONES OF CLAYEY SILT: 18.5'–20'	305'
	SOME OF GRAVEL: 23.5'–25'	
25'	END OF BORING @ 25.0'	

BORING B-1

NO SCALE

DEPTH		ELEV
0'	CLAYEY SILT, SOME FINE TO MEDIUM SAND, DULL BROWN, MOIST, MEDIUM STIFF (ML/FILL)	315'
5'	SILTY FINE TO MEDIUM SAND, YELLOWISH TAN, MOIST TO VERY MOIST, MEDIUM DENSE (SM/FILL) TRACE CLAY: 3.5'–6.5' REDDISH BROWN cf SAND: 6.5'–7.5'	310'
10'	SILTY FINE TO COARSE SAND, SOME FINE TO COARSE GRAVEL, LIGHT TAN, MOIST TO WET, MEDIUM DENSE (SM) TRACE ROOTS: 8.5'–10.0'	305'
15'		300'
20'	CLAYEY SILT, LITTLE FINE TO MEDIUM SAND, ORANGISH TAN AND WHITE, MOIST, VERY STIFF (ML) END OF BORING @ 20.0'	

BORING B-2

NO SCALE

LEGEND

- LIMIT OF DISTURBANCE
- DRAINAGE DIVIDE
- SUPER SILT FENCE
- CURB INLET PROTECTION
- GABION INFLOW PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE
- SOIL LINE

SEDIMENT BASIN #1

DRAINAGE AREA (PRE DEV.)	1.26 ac
DRAINAGE AREA (POST DEV.)	7.6 ac
STORAGE VOLUME REQ'D	13,680 cf (wet) 13,680 cf (dry)
STORAGE VOLUME PROVIDED	13,680 cf (wet) @ 309.8 13,680 cf (dry) @ 313.37
BOTTOM ELEVATION	307.0
BOTTOM DIMENSIONS	90'X42'
RISER CREST ELEVATION	312.0
TOP OF DAM	317.7
CLEANOUT ELEVATION	308.5
CLEANOUT DISTANCE FROM TOP OF RISER	9.2'

DEPTH / ELEV

DEPTH		ELEV
0'	CLAYEY SILT, LITTLE FINE SAND, TRACE FINE ROOTS, DULL BROWN, MOIST, MEDIUM STIFF (ML/FILL)	
5'	FINE TO COARSE GRAVEL, SOME FINE TO COARSE SAND, LITTLE SILT, TANNISH BROWN, WET, DENSE (GW-GM)	315'
10'	FINE TO MEDIUM POORLY-GRADED TO SILTY SAND, TRACE FINE GRAVEL, TAN, MOIST TO SATURATED, DENSE TO MEDIUM DENSE (SP-SM TO SM) TRACE CLAY: 8.5'–10.0'	310'
15'	SATURATED BELOW 13.5'	305'
20'	END OF BORING @ 20.0'	300'

BORING B-3

NO SCALE

DEPTH		ELEV
0'	SILTY FINE TO COARSE SAND, SOME FINE TO COARSE GRAVEL, TRACE CLAY, TAN, MOIST, DENSE (SM/FILL)	330'
5'	CLAYEY SILT, LITTLE FINE TO MEDIUM SAND, TRACE ORGANICS, BROWN, VERY MOIST, STIFF (ML/FILL)	325'
10'	SILTY FINE TO MEDIUM SAND, TRACE TO LITTLE CLAY, ORANGISH TAN AND TANNISH BROWN, MOIST, MEDIUM DENSE (SM) SOME mf GRAVEL: 6.0'–7.5'	320'
15'	FINE SANDY SILT, LITTLE CLAY, ORANGE AND LIGHT GRAY, MOIST, STIFF (ML)	315'
20'	SILTY FINE TO MEDIUM SAND, TRACE MICA, TAN, WET TO SATURATED, MEDIUM DENSE (SM) END OF BORING @ 25.0'	310'
25'		

BORING B-4

NO SCALE

DRAINAGE AREA DATA

INLET	D.A.(AC.)	'C' FACTOR	% IMP.
I-1	0.3	0.64	93
I-2	0.6	0.64	92
I-3	0.3	0.61	90
I-4	0.4	0.55	65
I-5	0.4	0.64	83

SOILS INVENTORY

SYMBOL	NAME	TYPE
SfB2	SASSAFRASS LOAM	B
SfC2	SASSAFRASS GRAVELLY, SANDY LOAM	B
Fa	FALLSINGTON LOAM	D
SaE	SASSAFRASS	B

STORMWATER MANAGEMENT DESIGN SUMMARY

DRAINAGE AREA: 7.60 ac

DESIGN STORM (YR.)	ALLOWABLE RELEASE (C.F.S.)	FACILITY INFLOW (C.F.S.)	FACILITY DISCHARGE (C.F.S.)	WATER SURFACE ELEVATION (FT.)	STORAGE VOLUME (AC. FT.)
2	3.18	25.02	2.51	312.16	0.712
10	12.71	42.85	12.59	314.08	1.144
100	N/A	62.69	N/A	315.62	1.578

AS-BUILT CERTIFICATE

CHRISTOPHER J. REID #19949 — DATE 9.12.00

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER — DATE 10.7.99

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

ENGINEER — DATE 8.6.99

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

NATURAL RESOURCES CONSERVATION SERVICE — DATE 11/2/99

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT — DATE 11/2/99

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

COUNTY HEALTH OFFICER — DATE 11/9/99

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 11/15/99

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 11/4/99

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 11/2/99

DATE	NO.	REVISION

OWNER
AUDREY OWENS ETAL
7533 GLENEAGLE DR.
JESSUP, MD 20794
(410) 799-4655

OWNER
OM HOSPITALITY MANAGEMENT, INC.
6251 WASHINGTON BLVD.
ELKRIDGE, MD 21075
(410) 379-3095

DEVELOPER
ASTON PROPERTIES
6525 MORRISON BLVD., SUITE 300
CHARLOTTE, NC 28211
(704) 366-7337

PROJECT
CVS
RETAIL STORE

AREA
Parcels 259 & 260
Tax Map 37 Block 14, 20 Zoned B-1, B-2
6th Election District
Howard County, Maryland

TITLE
DRAINAGE AREA MAP
GRADING AND
SEDIMENT CONTROL PLAN

RIEMER MUEGGE & ASSOCIATES INC
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, MD 21045
tel 410.997.8900 fax 410.997.9282

STATE OF MARYLAND — ARTHUR E. MUEGGE — No. 8707 — REGISTERED PROFESSIONAL ENGINEER — DATE

ARTHUR E. MUEGGE #8707

DESIGNED BY :	C.J.R.
DRAWN BY :	D.A.M.
PROJECT NO :	98313 SDP3.DWG
DATE :	OCTOBER 13, 1999
SCALE :	1" = 30'
DRAWING NO.	3 OF 8

AS-BUILT 9/11/00 SDP-99-123

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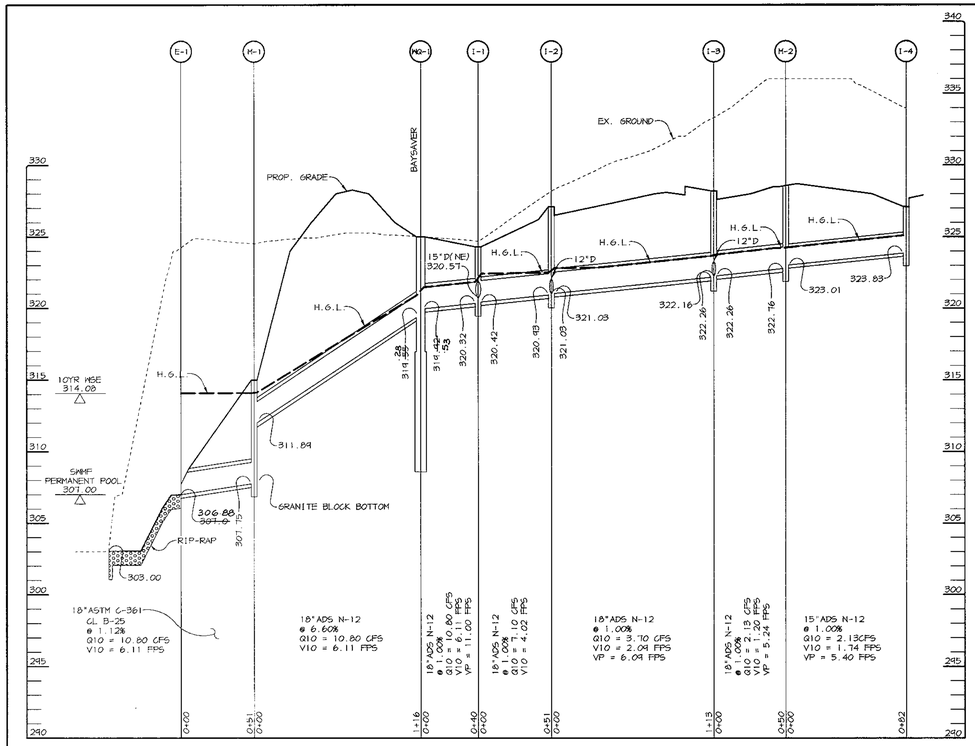
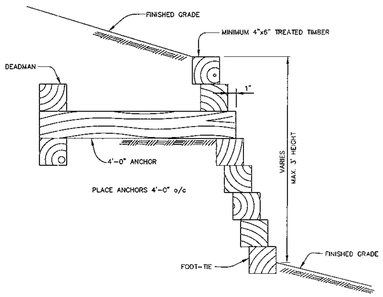


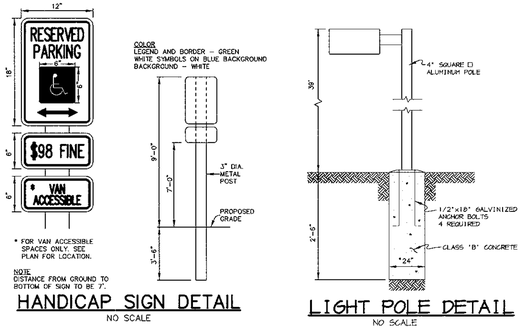
PROFILE

SCALE :
HOR. -1"=50'
VERT. -1"=5'



TIMBER RETAINING WALL DETAIL

NO SCALE

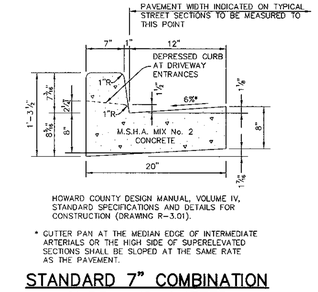


HANDICAP SIGN DETAIL

NO SCALE

LIGHT POLE DETAIL

NO SCALE

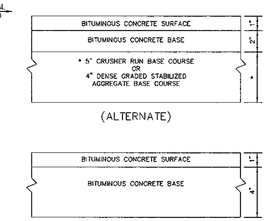


HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-3.01).

* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AS THE PAVEMENT.

STANDARD 7" COMBINATION CURB AND GUTTER

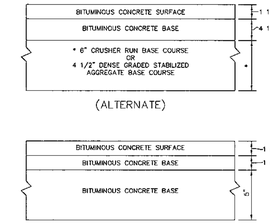
NO SCALE



HOWARD COUNTY DESIGN MANUAL VOLUME IV– STANDARD SPECIFICATIONS AND DETAILS FOR CONSTUCTION (DRAWING R-2.01)

P-1 PAVING

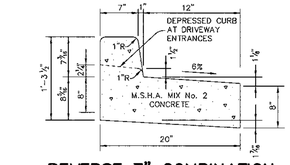
NO SCALE



HOWARD COUNTY DESIGN MANUAL VOLUME IV– STANDARD SPECIFICATIONS AND DETAILS FOR CONSTUCTION (DRAWING R-2.01)

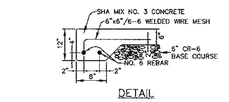
P-3 PAVING

NO SCALE



REVERSE 7" COMBINATION CURB AND GUTTER

NO SCALE



DETAIL

NOTE: SEE SECTION A-A FOR SIDE OF PAD AGAINST BUILDING WALL

SECTION

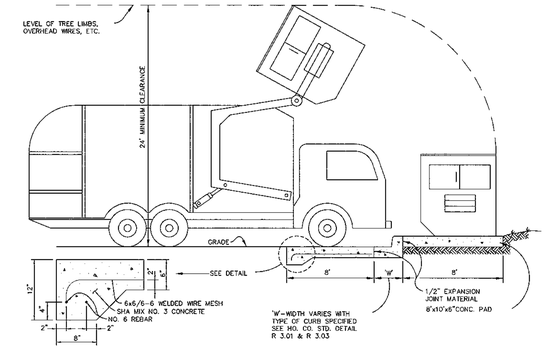
LOADING AREA CONCRETE PAD DETAILS

NO SCALE

NOTES :
PROVIDE LATITUDINAL EXPANSION JOINTS AT 15' O.C. (MAX.)
PROVIDE CONTRACTION (DUMMY) JOINT AT 5' O.C. INTERVALS BETWEEN EXPANSION JOINTS. SIDEWALK TO BE SCRIBED IN 5' MAX. SQUARES.

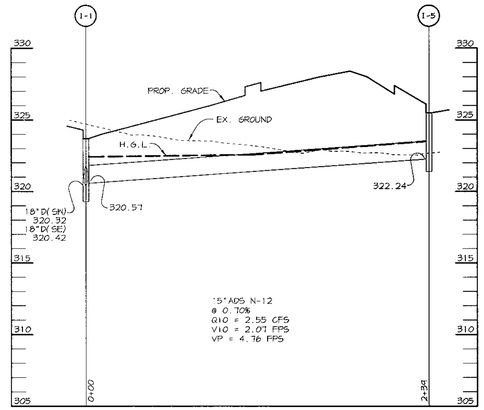
SIDEWALK DETAIL

NO SCALE



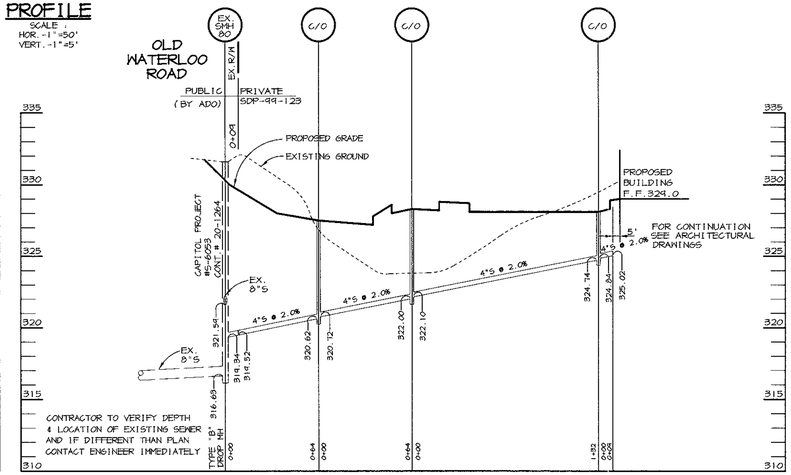
DUMPSTER PAD

NO SCALE



PROFILE

SCALE :
HOR. -1"=50'
VERT. -1"=5'



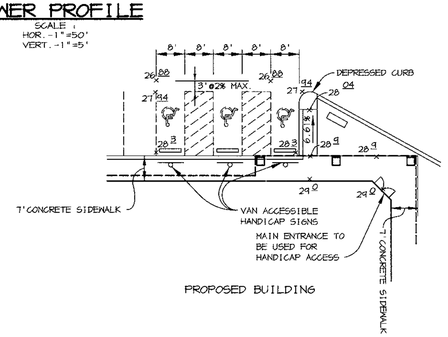
SEWER PROFILE

SCALE :
HOR. -1"=50'
VERT. -1"=5'

STRUCTURE SCHEDULE

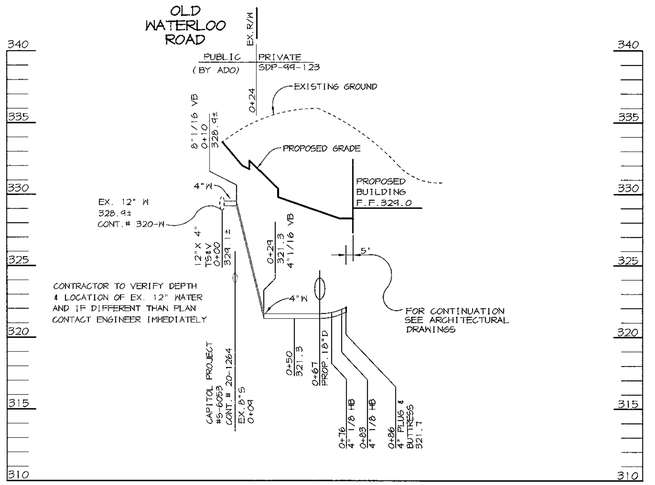
STRUCTURE	TYPE	LOCATION	INV. IN	INV. OUT	TOP	REMARKS
I-1	A-5	✳ N 555,662.33 E 1,370,537.35	320.42 (18") 320.57 (15")	320.32	324.3	HOCO STD. DETAIL 5D 4.40
I-2	A-5	✳ N 555,637.48 E 1,370,583.04	321.03 (12") 321.03 (18")	320.93	327.2	HOCO STD. DETAIL 5D 4.40
I-3	A-5	✳ N 555,650.13 E 1,370,644.87	322.26 (12") 322.26 (18")	322.16	328.2	HOCO STD. DETAIL 5D 4.40
I-4	A-5	✳ N 555,769.01 E 1,370,732.78	-	323.83	327.7	HOCO STD. DETAIL 5D 4.40
I-5	S-COMB	✳ N 555,883.53 E 1,370,621.04	-	322.24	325.5	HOCO STD. DETAIL 5D 4.32
M-1	4' MH	✳ N 555,521 E 1,370,466	311.89	307.75	315.0	HOCO STD. DETAIL 6 5.12
M-2	4' MH	✳ N 555,679 E 1,370,726	323.01	322.76	328.5	HOCO STD. DETAIL 6 5.12
E-1	18" CONC. END SECTION	✳ N 555,427 E 1,307,462	~~307.00~~ 306.88	-	-	HOCO STD. DETAIL 5D 5.51
MG-1	BAYSAVER	✳ N 555,625 E 1,370,518	319.~~53~~ ~~45~~	319.~~28~~ ~~55~~	~~324.95~~ ~~325.0~~	SEE DETAIL, SHEET 7

NOTES: ✳ LOCATION IS AT CENTER OF THROAT OPENINGS AT FACE OF CURB FOR INLETS.



HANDICAP RAMP DETAIL

NO SCALE



WATER PROFILE

SCALE:
HOR. 1"=50'
VERT. 1"=5'

AS-BUILT CERTIFICATE

CHRISTOPHER J. REID #19949 — 9-12-00 DATE

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

Diane Matuszak M.D. /BSN — 11/9/99
COUNTY HEALTH OFFICER — DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — 11/15/99 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 11/4/99 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 11/2/99 DATE

DATE	NO.	REVISION

OWNER
AUDREY OWENS ETAL
7533 GLENEAGLE DR.
JESSUP, MD 20794
(410) 799-4655

OWNER
OM HOSPITALITY MANAGEMENT, INC.
6251 WASHINGTON BLVD.
ELKRIDGE, MD 21075
(410) 379-3095

DEVELOPER
ASTON PROPERTIES
6525 MORRISON BLVD., SUITE 300
CHARLOTTE, NC 28211
(704) 366-7337

PROJECT
CVS
RETAIL STORE

AREA
Parcels 259 & 260
Tax Map 37 Block 14, 20 Zoned B-1, B-2
6th Election District
Howard County, Maryland

TITLE
PROFILES, NOTES AND DETAILS

RIEMER MUEGGE & ASSOCIATES INC
ENGINEERING ● ENVIRONMENTAL SERVICES ● PLANNING ● SURVEYING
8818 Centre Park Drive, Columbia, MD 21045
tel 410.997.8900 fax 410.997.9282

STATE OF MARYLAND — ARTHUR E. MUEGGE — No. 8707 — REGISTERED PROFESSIONAL ENGINEER

ARTHUR E. MUEGGE #8707

DESIGNED BY :	C.J.R.
DRAWN BY :	D.A.M.
PROJECT NO :	98313 SDP4.DWG
DATE :	OCTOBER 13, 1999
SCALE :	AS SHOWN
DRAWING NO.	4 OF 8

AS-BUILT 9/11/00 SDP-99-123

M:\PROJECT\98313\SDP4.DWG Fri Aug 06 12:18:37 1999 RIEMER MUEGGE & ASSOCIATES, INC.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

<u>Seedbed Preparation : Loosen upper three inches of soil by raking,</u> discing or other acceptable means before seeding, if not previously loosened.

<u>Soil Amendments : Apply 600 lbs. per acre 10-10-10 fertilizer (14</u> lbs. per 1000 sq.ft.).

<u>Seeding : For periods March 1 thru April 30 and from August 15 thru</u> November 15, seed with 2-1/2 bushels per acre of annual rye (3.2 lbs. per 1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (0.07 lbs. per 1000 sq.ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

<u>Mulching : Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000</u> sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

<u>Seedbed Preparation : Loosen upper three inches of soil by raking,</u> discing or other acceptable means before seeding, if not previously loosened.

<u>Soil Amendments : In lieu of soil test recommendations, use one of</u> the following schedules :

1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs. per 1000 sq.ft.).

2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.

<u>Seeding : For the period March 1 thru April 30 and from August 1</u> thru October 15, seed with 60 lbs. per acre (1.4 lbs. per 1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.05 lbs. per 1000 sq.ft.) of weeping lovegrass. During the period October 16 thru February 28, protect site by one of the following options :

1) 2 tons per acre of well-anchored mulch straw and seed as soon as possible in the spring.

2) Use sod.

3) Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well anchored straw.

<u>Mulching : Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000</u> sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

<u>Maintenance : Inspect all seeded areas and make needed repairs,</u> replacements and reseedings.

SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES, AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THE PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOD, TEMPORARY SEEDING, AND MULCHING (SEC. G.). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS:

TOTAL AREA OF SITE	1.54 ACRES
AREA DISTURBED	2.3 ACRES
AREA TO BE ROOFED OR PAVED	1.2 ACRES
AREA TO BE VEGETATIVELY STABILIZED	1.1 ACRES
TOTAL CUT	7514 CU. YARDS
TOTAL FILL	1450 CU. YARDS

OFFSITE WASTE/BORROW AREA LOCATION TO HAVE AN ACTIVE GRADING PERMIT

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
10. SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
11. SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.
12. CUT AND FILL QUANTITIES PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT BID QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL, STRUCTURAL FILL OR EMBANKMENT MATERIAL, NOR DO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.
13. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 AC., APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
14. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

Definition

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

Purpose

To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies

I. This practice is limited to areas having 2:1 or flatter slopes where:

a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.

c. The original soil to be vegetated contains material toxic to plant growth.

d. The soil is so acidic that treatment with limestone is not feasible.

II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications

I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimentation Station.

II. Topsoil Specifications - Soil to be used as topsoil must meet the following:

i. Topsol shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½" in diameter.

ii. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.

iii. Where subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

For sites having disturbed areas under 5 acres:

i. Place topsoil (if required) and apply soil amendments as specified in <u>20.0 Vegetative Stabilization</u> - Section I - Vegetative Stabilization Methods and Materials.

III. For sites having disturbed areas over 5 acres:

i. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:

a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.

b. Organic content of topsoil shall be not less than 1.5 percent by weight.

c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.

d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

Note: Topsoil substitutes to amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority may be used in lieu of natural topsoil.

ii. Place topsoil (if required) and apply soil amendments as specified in <u>20.0 Vegetative Stabilization</u> - Section I - Vegetative Stabilization Methods and Materials.

V. Topsoil Application

i. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.

ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.

iii. Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.

iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

VI. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:

i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for site having disturbed areas under 5 acres shall conform to the following requirements:

a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.

b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.

c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.

d. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guideline Specifications, Soil Preparation and Sodding. MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE AND SUPER SILT FENCE. ENLARGE SWMF/SEDIMENT BASIN (SDP-97-106) PER GRADING PLAN. USE SEDIMENT CONTROL DETAILS PER SDP-97-106 DURING ENLARGEMENT OF SWMF/SEDIMENT BASIN. (3 WEEKS)
3. WITH PERMISSION OF HOWARD COUNTY DILP SEDIMENT CONTROL INSPECTOR, PERFORM ROUGH GRADING. OBTAIN BUILDING PERMIT AND BEGIN BUILDING AND WALL CONSTRUCTION. (2 WEEKS)
4. AS SUBGRADE ELEVATIONS ARE ESTABLISHED, INSTALL UTILITIES INCLUDING STORM DRAINS, WATER, AND SEWER. (2 WEEKS)
5. INSTALL CURB AND GUTTER, THEN PAVE. (2 WEEKS)
6. APPLY TOPSOIL AND STABILIZE DISTURBED AREAS AS NECESSARY IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (3 DAYS)
7. INSTALL LIGHTS, LANDSCAPING, SIGNS, AND STRIPING, AND COMPLETE REMAINING BUILDING CONSTRUCTION. (2 MONTHS)
8. UPON APPROVAL OF HOWARD COUNTY DILP SEDIMENT CONTROL INSPECTOR AND UPON THE PERMANENT STABILIZATION OF ALL AREAS DRAINING TO THE BASIN INCLUDING SDP-97-106, REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES AND CONVERT SEDIMENT BASIN TO PERMANENT SWMF IN THE FOLLOWING STEPS:
   a. CLEAN STORM DRAIN INLETS AND FLUSH OUT PIPES, (1 DAY)
   b. PUMP OUT STANDING WATER IN BASIN USING PUMPING STATION, (1 DAY)
   c. REMOVE ACCUMULATED SEDIMENT, (2 DAYS)
   d. COMPLETE/REPAIR GRADING PER SHEET 2, REMOVE DEWATERING DEVICE, ORIFICE PLATE, AND PLYWOOD FROM SEDIMENT BASIN #1 (2 DAYS)
   e. INSTALL PERMANENT LOW FLOW PIPE, (1 DAY)
   f. INSTALL RIP-RAP, (1 DAY)
   g. STABILIZE REMAINING DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (2 DAYS)

MD-378 STANDARDS AND SPECIFICATIONS

SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

SITE PREPARATION

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 50 foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

EARTH FILL

Material – The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable material. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

Placement – Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8-inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction – The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tire or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that water can be squeezed out.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within +/– 2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

Cutoff Trench – The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter.

The back fill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

STRUCTURE BACKFILL

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

PIPE CONDUITS

All pipes shall be circular in cross section.

Reinforced Concrete Pipe – All of the following criteria shall apply for reinforced concrete pipe:

1. Materials – Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361. An approved equivalent is AWWA Specification C-302.
2. Bedding – All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the side of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.
3. Laying pipe – Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the riser.
4. Backfilling shall conform to Structure Backfill.
5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

CONCRETE

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 608, Mix No. 3.

ROCK RIPRAP

All rock shall be dense, sound, and free from cracks, seams, and other defects conducive to accelerated weathering. The rock fragments shall be angular to subrounded in shape. The least dimension of an individual rock fragment shall be not less than one-third the greatest dimension of the fragment.

The rock shall have the following properties:

1. Bulk specific gravity (saturated surface-dry basis) not less than 2.5.
2. Absorption not more than three percent.
3. Soundness: Weight loss in five cycles not more than 20 percent when sodium sulfate is used.

Bulk specific gravity and absorption shall be determined according to ASTM C 127. The test for soundness shall be performed according to ASTM C 88.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 919.12.

CARE OF WATER DURING CONSTRUCTION

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to sumps from which the water shall be pumped.

STABILIZATION

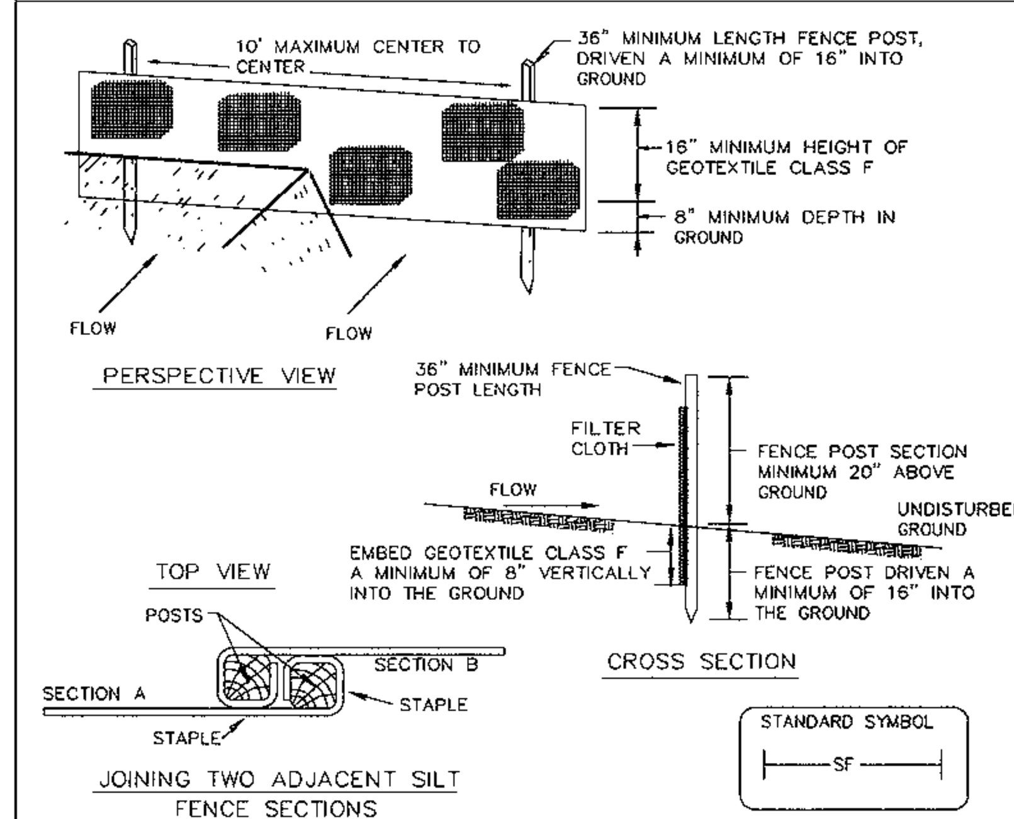
All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

EROSION AND SEDIMENT CONTROL

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

DETAIL 22 – SILT FENCE



Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.

2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

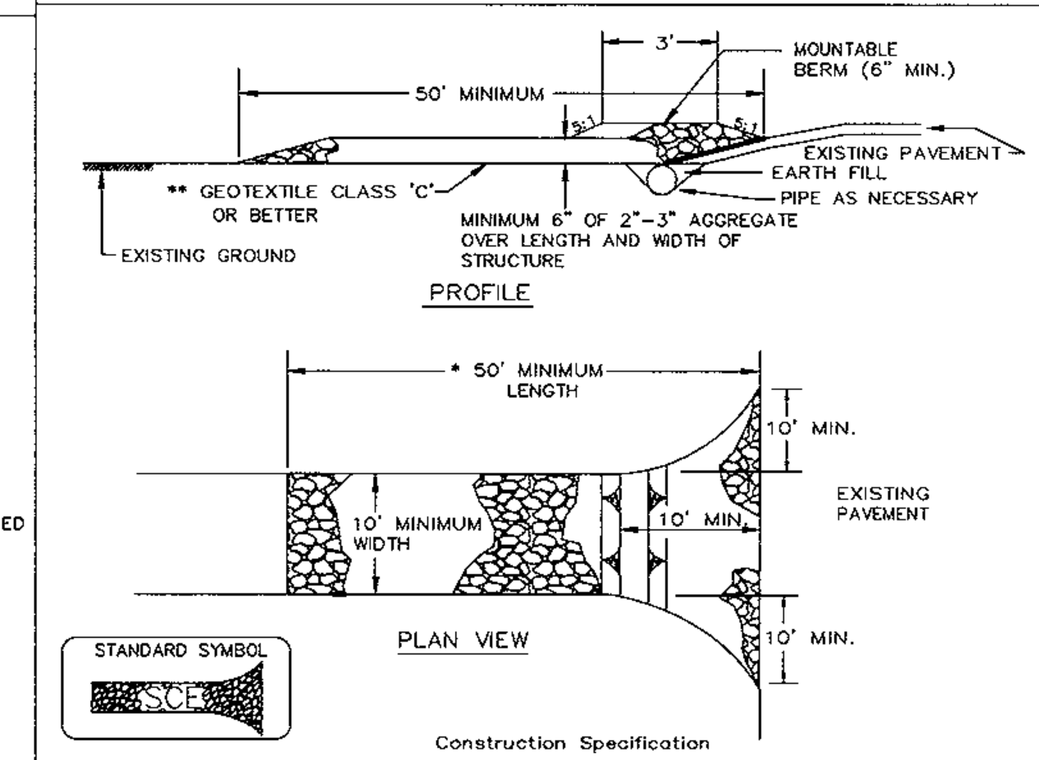
Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft ²/ minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 15 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 24 – STABILIZED CONSTRUCTION ENTRANCE



Construction Specification

1. Length – minimum of 50' (*30' for single residence lot).

2. Width – 10' minimum, should be flared at the existing road to provide a turning radius.

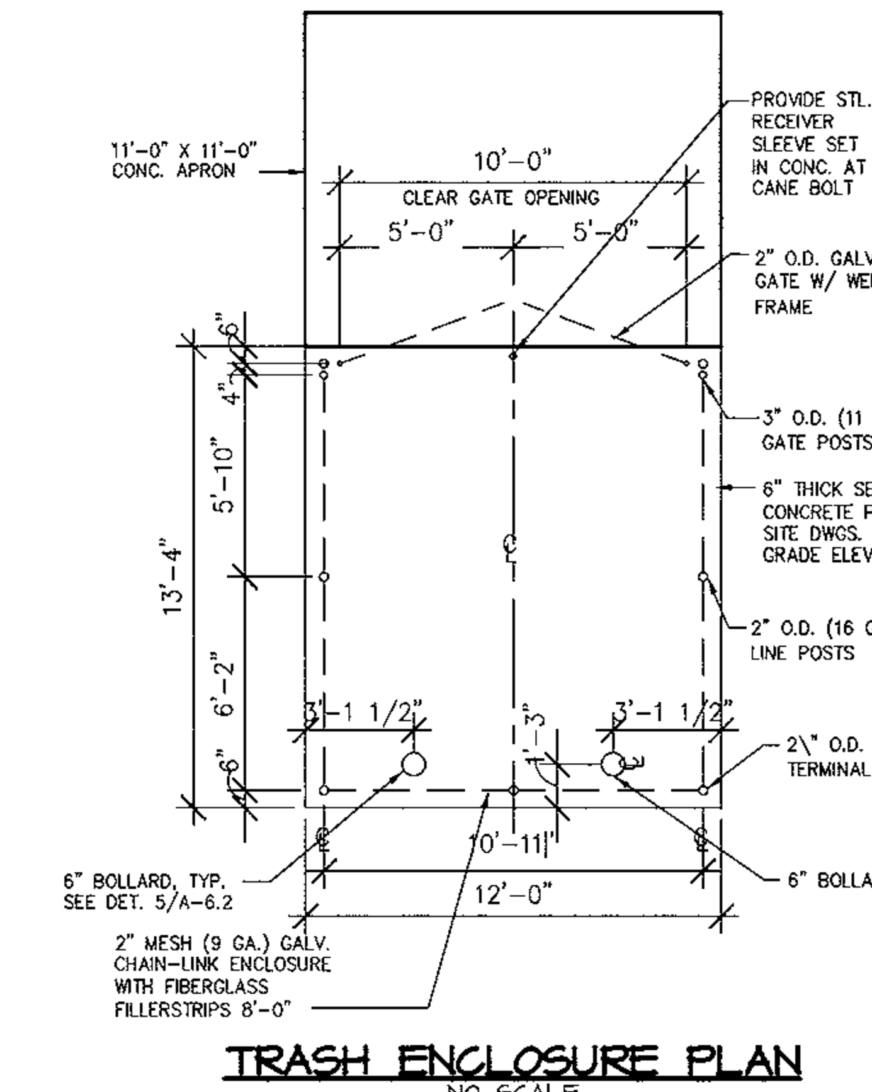
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.

4. Stone – crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.

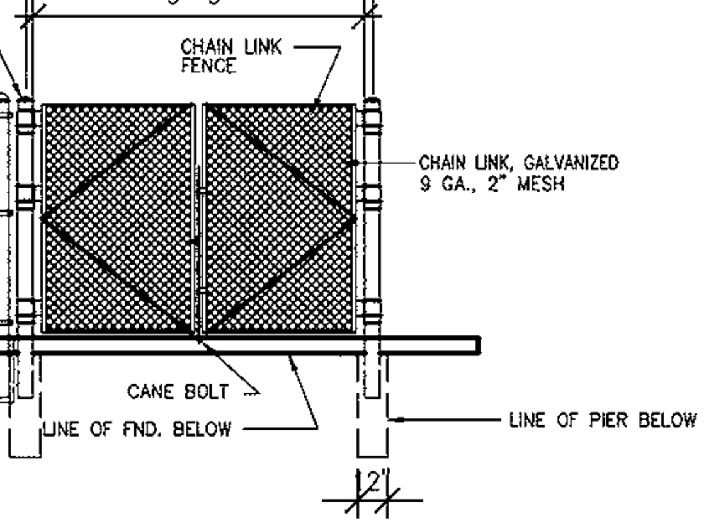
5. Surface Water – all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.

6. Location – A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 17 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

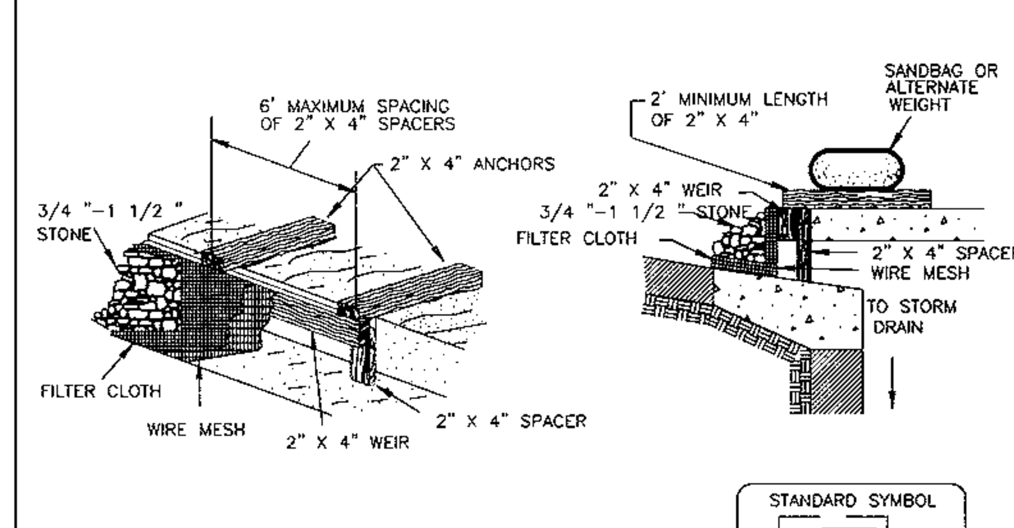


TRASH ENCLOSURE PLAN
NO SCALE



GATE ELEVATION
NO SCALE

DETAIL 23C – CURB INLET PROTECTION



Construction Specifications

1. Attach a continuous piece of wire mesh (30" minimum width by throat length plus 4') to the 2" x 4" weir (measuring throat length plus 2') as shown on the standard drawing.

2. Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" weir.

3. Securely nail the 2" X 4" weir to a 9" long vertical spacer to be located between the weir and the inlet face (max. 4' apart).

4. Place the assembly against the inlet throat and nail (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.

5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.

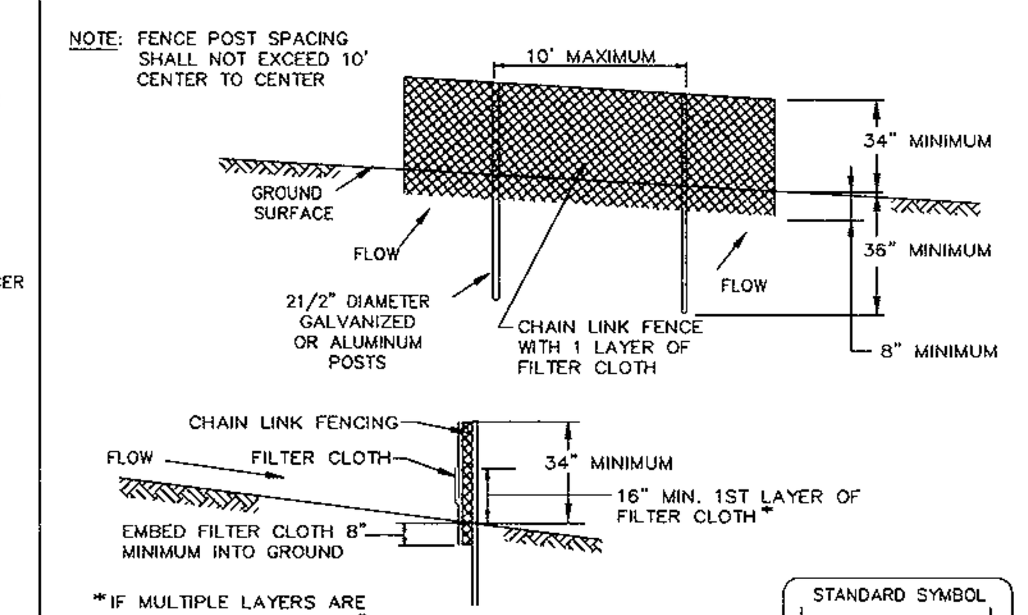
6. Form the 1/2 " x 1/2 " wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 3/4 " x 1 1/2 " stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.

7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.

8. Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 16 - 5B	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 33 – SUPER SILT FENCE



Construction Specifications

1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.

2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.

3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.

4. Filter cloth shall be embedded a minimum of 8" into the ground.

5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.

6. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height

7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft ²/minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE H - 26 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

AS-BUILT CERTIFICATE

CHRISTOPHER J. REID # 19949 — DATE 9.12.00

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER — DATE 10.7.99

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

ENGINEER — DATE 8.6.99

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

NATURAL RESOURCES CONSERVATION SERVICE — DATE 11/2/99

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT — DATE 11/2/99

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

Dione Matusyak M.D. — COUNTY HEALTH OFFICER — DATE 11/9/99

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 11/15/99

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 11/4/99

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 11/12/99

DATE	NO.	REVISION

OWNER	OWNER
AUDREY OWENS ETAL 7533 GLENEAGLE DR. JESSUP, MD 20794 (410) 799-4655	OM HOSPITALITY MANAGEMENT, INC. 6251 WASHINGTON BLVD. ELKRIDGE, MD 21075 (410) 379-3095

DEVELOPER

ASTON PROPERTIES
6525 MORRISON BLVD., SUITE 300
CHARLOTTE, NC 28211
(704) 366-7337

PROJECT

CVS
RETAIL STORE

AREA

Parcels 259 & 260
Tax Map 37 Block 14, 20 Zoned B-1, B-2
6th Election District
Howard County, Maryland

TITLE

SEDIMENT CONTROL NOTES AND DETAILS

RIEMER MUEGGE & ASSOCIATES INC
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, MD 21045
tel 410.997.8900 fax 410.997.9282

DATE

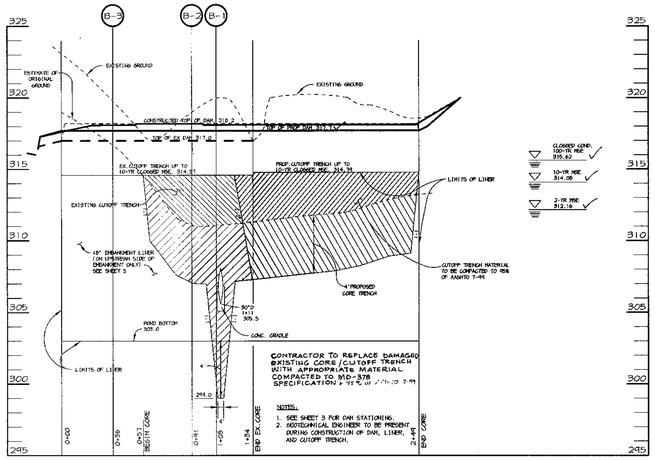
STATE OF MARYLAND — ARTHUR E. MUEGGE III — NO. 8707 — REGISTERED PROFESSIONAL ENGINEER

ARTHUR E. MUEGGE #8707

DESIGNED BY :	C.J.R.
DRAWN BY :	D.A.M.
PROJECT NO :	98313 SDP5.DWG
DATE :	OCTOBER 13, 1999
SCALE :	AS SHOWN
DRAWING NO.	5 OF 8

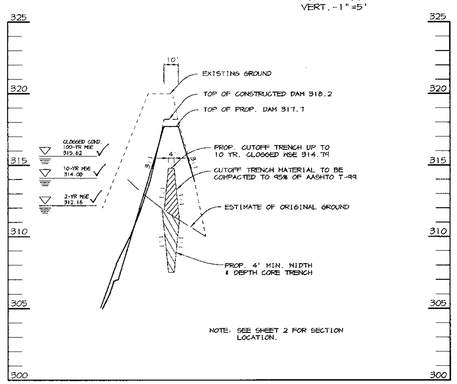
AS-BUILT 9/11/00 SDP-99-123

M:\PROJECT\98313\SDP5.DWG Fri Aug 06 12:19:31 1999 RIEMER MUEGGE & ASSOCIATES, INC.



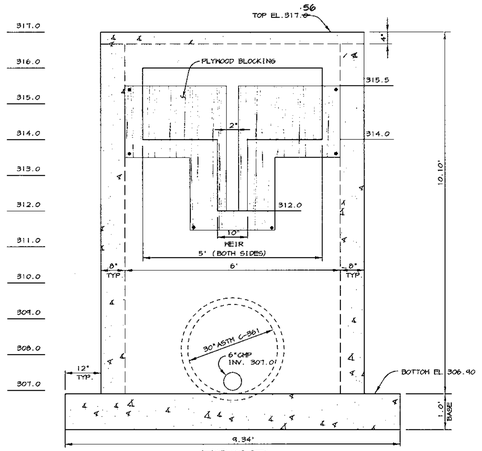
PROFILE OF EMBANKMENT ℄

SCALE :
HOR. - 1" = 50'
VERT. - 1" = 5'

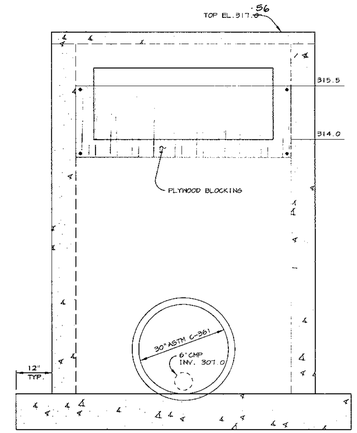


SECTION A-A THROUGH EMBANKMENT

SCALE :
HOR. - 1" = 50'
VERT. - 1" = 5'



FRONT



BACK

✓EXISTING S-4 DETAIL

SCALE: 1"=2'

NOTES:
1. OTHER THAN THE MODIFICATIONS SHOWN HERE, THIS STRUCTURE SHALL BE CONSTRUCTED IN ACCORDANCE WITH HO. CO. STD. DETAIL SD 4.01, HOWEVER A BRICK STRUCTURE IS NOT ALLOWED.
2. SHOP DRAWINGS TO BE SUBMITTED TO HOWARD COUNTY AND CONSULTANT PRIOR TO FABRICATION.
3. DURING CONSTRUCTION, OPENING TO BE BLOCKED USING PLYWOOD BOLTED TO INSIDE OF RISER UP TO ELEV. 315.5. ALL SEALS TO BE WATER TIGHT. A 3" NIER STARTING AT 312.0 TO BE CUT INTO PLYWOOD.
4. REMOVE EXISTING TRASH RACK IF NECESSARY TO ATTACH PLYWOOD AND REPLACE AFTER PLYWOOD IS IN PLACE.

GEOTECHNICAL RECOMMENDATIONS FOR POND CONSTRUCTION

1. STRUCTURE S-4 FOUNDATION MATERIALS TO BE VISUALLY EXAMINED AND TESTED FOR A NET BEARING PRESSURE OF 2500 psf (MIN.) IMMEDIATELY PRIOR TO PLACEMENT OF FOUNDATION CONCRETE.
2. PRIOR TO BACKFILLING, EXPOSED SUBGRADE SHALL BE EXAMINED, PROOFROLLED, AND/OR PROBED AS NECESSARY AND UNSTABLE MATERIALS SHALL BE REPLACED AND COMPACTED WITH APPROVED FILL.
3. DEWATERING DURING CONSTRUCTION SHALL BE ACCOMPLISHED USING INTERCEPTOR TRENCHES, SUMPS, AND/OR PUMPS AS NECESSARY TO TWO FEET BELOW THE BOTTOM OF THE CONSTRUCTION AREA. SUMPS SHALL BE REMOVED AND BACKFILLED WITH CLAYEY SOILS AFTER CONSTRUCTION. GRAVEL MAY BE USED TO PROVIDE A WORKING SURFACE, BUT NOT BENEATH THE FOOTPRINT OF THE EMBANKMENT.
4. SURFACE RUNOFF SHALL BE DIVERTED AWAY FROM THE LIMITS OF CONSTRUCTION BY BERMING, TRENCHING, AND/OR GRADING AS NECESSARY. THE GROUND SURFACE SHALL BE SEALED WITH A SMOOTH DRUM ROLLER AT THE END OF EACH WORKDAY AND PRIOR TO RAINFALL. WATER SHALL NOT BE ALLOWED TO POND ON TOP OF SLOPE AREAS.
5. A SHEEPSFOOT ROLLER SHALL BE USED FOR COMPACTION; A SMOOTH DRUM ROLLER SHALL BE USED FOR SEALING ONLY.
6. A SOIL TECHNICIAN SHALL BE PRESENT DURING FILL OPERATIONS TO OBSERVE AND TEST COMPACTION. DENSITY TESTS SHALL BE 1 TEST PER 2500 sf OF FILL AREA (MIN.) FOR EACH LIFT PLACED.

OPERATION, MAINTENANCE AND INSPECTION

INSPECTION OF THE POND SHOWN HEREON SHALL BE PERFORMED AT LEAST ONCE ANNUALLY. IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCS "STANDARDS AND SPECIFICATION FOR PONDS" (MD378) THE POND OWNER AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

OPERATION AND MAINTENANCE SCHEDULE
FOR BAYSAVER WATER QUALITY DEVICE

1. Stormceptor water quality structures will require periodic inspection and cleaning to maintain operation and function. Owners will have the Stormceptor unit inspected yearly or as required by Howard County, utilizing the Stormceptor Inspection/ Monitoring Form. Inspections can be done by using a clear Plexiglas tube ("sludge judge") to extract a water column sample. When sediment depths exceed the specified level (Table 6 of Technical Manual) then cleaning of the unit is required.
2. Stormceptor water quality structures must be checked and cleaned immediately after petroleum spills. Contact appropriate regulatory agencies.
3. Maintenance of Stormceptor units should be done by a vacuum truck which will remove the water, sediment, debris, floating hydrocarbons, and other materials in the unit. The proper cleaning and disposal of the removed materials and liquid must be followed.
4. Inlet and outlet pipes must be checked for any obstructions and if any obstructions are found they must be removed. Structural parts of the Stormceptor will be repaired as needed.
5. Owner shall retain and make Stormceptor Inspection/Monitoring Forms available to Howard County officials upon their request.

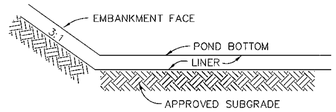
OPERATION AND MAINTENANCE SCHEDULE
OF PRIVATELY OWNED AND MAINTAINED
STORMWATER MANAGEMENT FACILITY
RETENTION POND

ROUTINE MAINTENANCE

1. Facility shall be inspected anually and after major storms. Inspections should be performed during wet weather to determine if the pond is functioning properly.
2. Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year, once in June and once in September. Other side slopes and maintenance access should be mowed as needed.
3. Debris and litter next to the outlet structure shall be removed during regular mowing operations and as needed.
4. Visible signs of erosion in the pond as well as riprap outlet area shall be repaired as soon as it is noticed.

NON-ROUTINE MAINTENANCE

1. Structural components of the pond such as the dam, the riser, and the pipes shall be repaired upon the the detection of any damage. The components should be inspected during routine maintenance operations.
2. Sediment should be removed when its accumulation significantly reduces the design storage, interferes with the function of the riser, when deemed necessary for aesthetic reasons, or when deemed necessary by the Howard County's Department of Public Works.

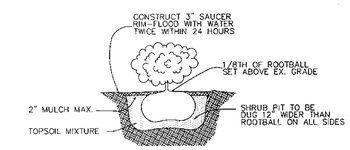


LINER NOTES :

1. THE LINER SHALL BE AT LEAST 18" THICK PLACED AS COMPACTED FILL IN LOOSE LIFTS OF 8", COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR METHOD (ASTM D-698).
2. FILL MATERIAL FOR THE LINER SHALL CONSIST OF SILTY OR SANDY CLAY (CL), OR CLAYEY SAND (SC). CLAYEY SAND MATERIALS SHALL HAVE NO LESS THAN 30% PASSING THE No. 200 SIEVE. OTHER BACKFILL MATERIALS MAY BE CONSIDERED AND APPROVED BY THE GEOTECHNICAL ENGINEER.
3. THE LINER SUBGRADE SHALL BE OBSERVED BY THE GEOTECHNICAL ENGINEER TO BE STABLE PRIOR TO BACKFILLING THE LINER.
4. THE LINER SHALL EXTEND VERTICALLY AT LEAST TO THE 10-YEAR WATER SURFACE ELEVATION.

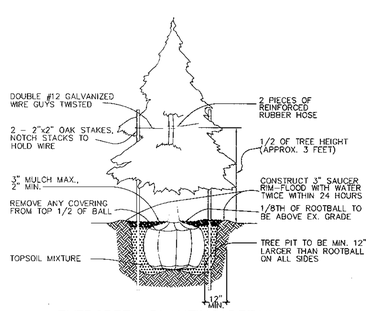
LINER DETAIL

NO SCALE



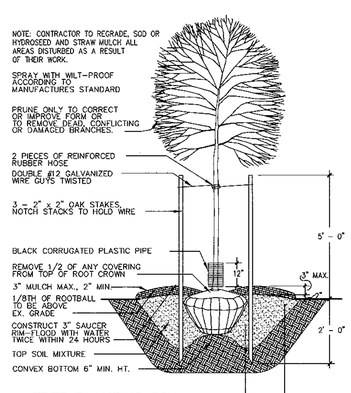
SHRUB PLANTING DETAIL

NOT TO SCALE



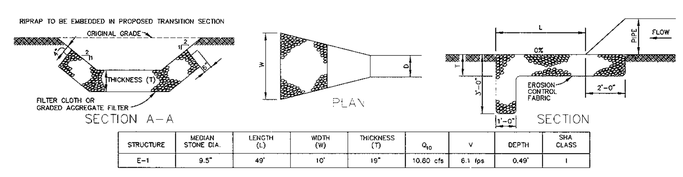
EVERGREEN PLANTING DETAIL

NOT TO SCALE



TREE PLANTING DETAIL

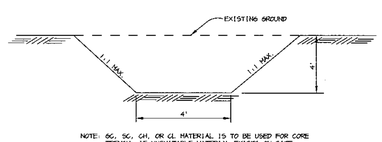
NOT TO SCALE



STRUCTURE	MEDIAN STONE DIA.	LENGTH (L)	WIDTH (W)	THICKNESS (T)	Q_{10}	V	DEPTH	SHA CLASS
E-1	9.5"	49'	10'	19"	10.60 cfs	6.1 fps	0.49'	I

RIPRAP OUTLET PROTECTION DETAIL

NO SCALE



NOTE: SC, SC, CH, OR CL MATERIAL IS TO BE USED FOR CORE TRENCH. IF UNSUITABLE MATERIAL EXISTS ON SITE, ACCEPTABLE MATERIAL WILL NEED TO BE TRUCKED TO SITE.

CORE TRENCH DETAIL

NO SCALE

PLANTING DETAILS

AS-BUILT CERTIFICATE

CHRISTOPHER J. REID #19949 — 9.12.00 DATE

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER — 10.7.99 DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

ENGINEER — 8.6.99 DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

NATURAL RESOURCES CONSERVATION SERVICE — 11/2/99 DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT — 11/2/99 DATE

APPROVED : PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

COUNTY HEALTH OFFICER — 11/9/99 DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — 11/15/99 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 11/4/99 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 11/12/99 DATE

DATE	NO.	REVISION

OWNER
AUDREY OWENS ETAL
7533 GLENEAGLE DR.
JESSUP, MD 20794
(410) 799-4655

OWNER
OM HOSPITALITY MANAGEMENT, INC.
6251 WASHINGTON BLVD.
ELKRIDGE, MD 21075
(410) 379-3095

DEVELOPER
ASTON PROPERTIES
6525 MORRISON BLVD., SUITE 300
CHARLOTTE, NC 28211
(704) 366-7337

PROJECT
CVS
RETAIL STORE

AREA
Parcels 259 & 260
Tax Map 37 Block 14, 20 Zoned B-1, B-2
6th Election District
Howard County, Maryland

TITLE
SWM PROFILES AND DETAILS

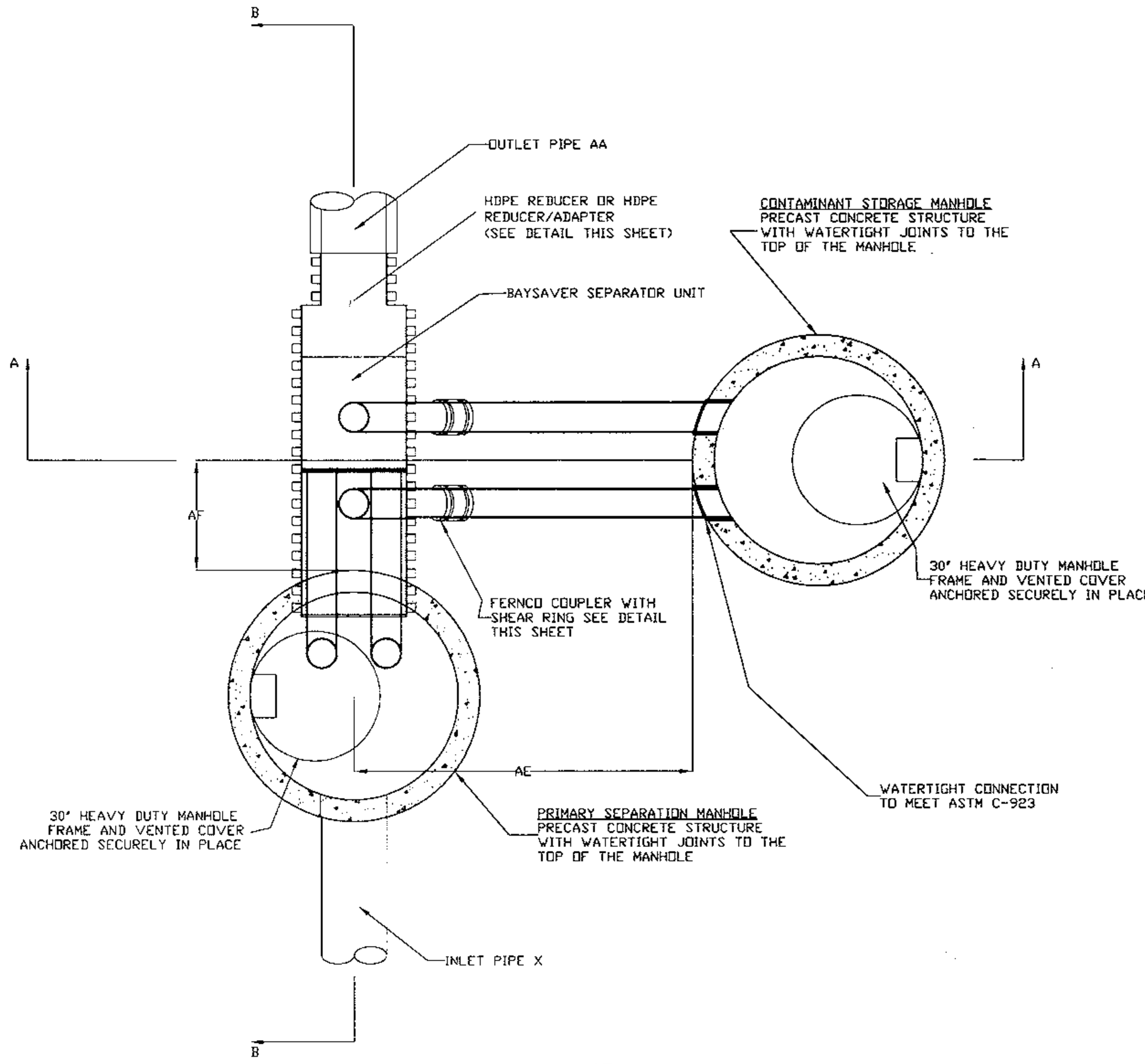
RIEMER MUEGGE & ASSOCIATES INC
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, MD 21045
tel 410.997.8900 fax 410.997.9282

DATE
STATE OF MARYLAND — ARTHUR E. MUEGGE III — NO. 8707 — REGISTERED PROFESSIONAL ENGINEER
ARTHUR E. MUEGGE #8707

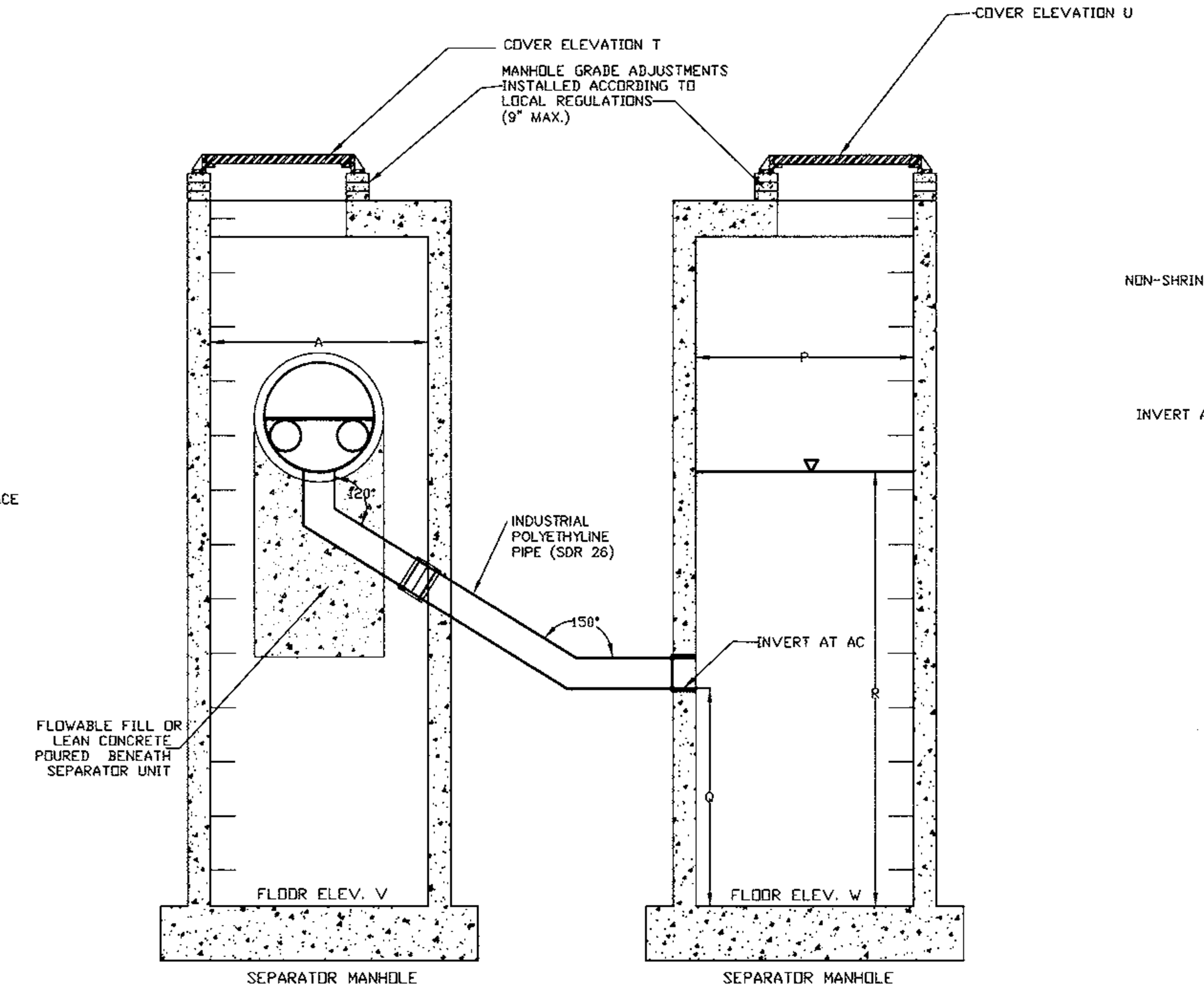
DESIGNED BY :	C.J.R.
DRAWN BY :	D.A.M.
PROJECT NO :	98313 SDP6.DWG
DATE :	OCTOBER 13, 1999
SCALE :	AS SHOWN
DRAWING NO.	6 OF 8

AS-BUILT 9/11/00 SDP-99-123

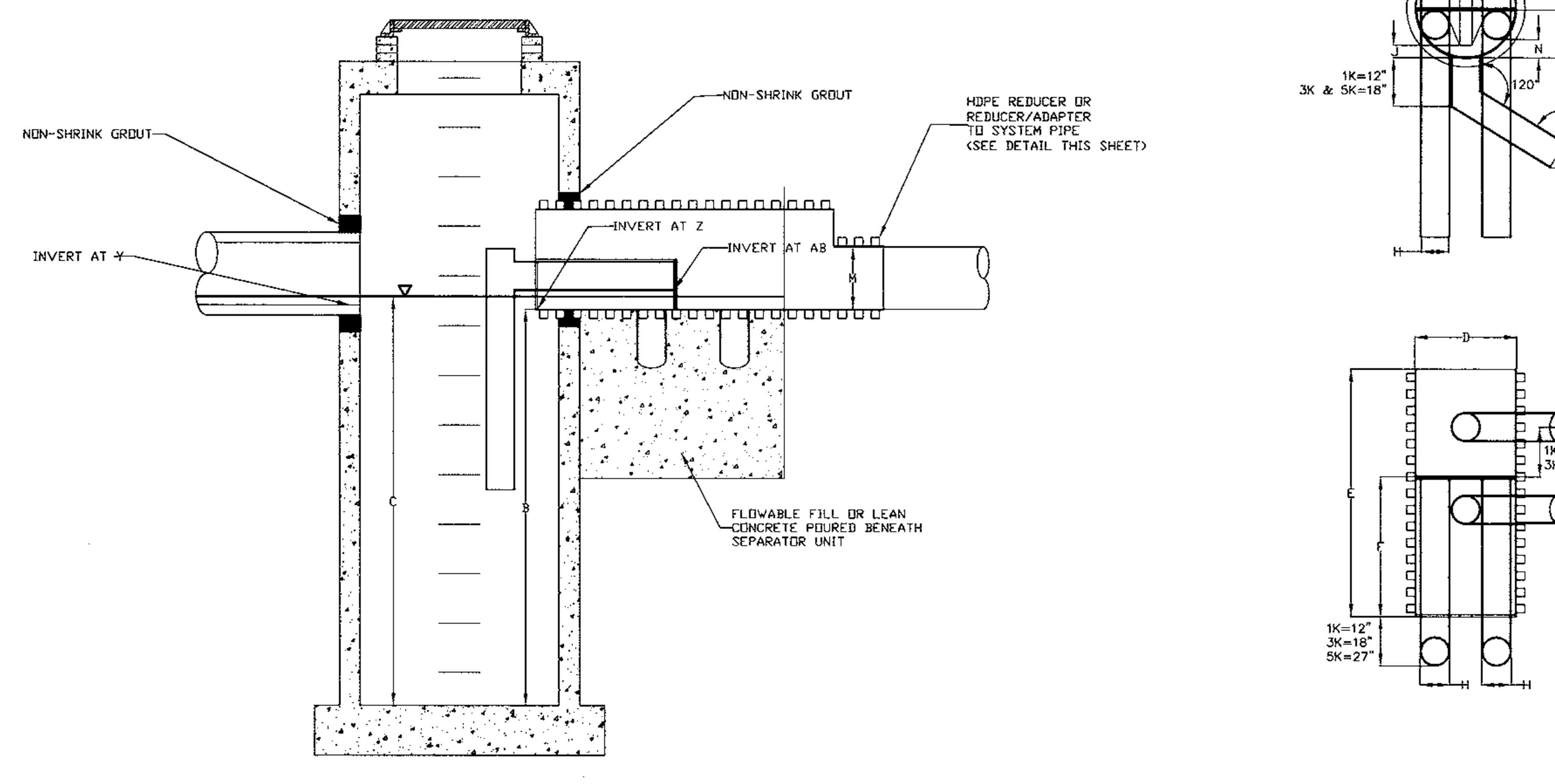
M:\PROJECT\98313\SDP6.DWG Fri Aug 06 12:26:16 1999 RIEMER MUEGGE & ASSOCIATES, INC.



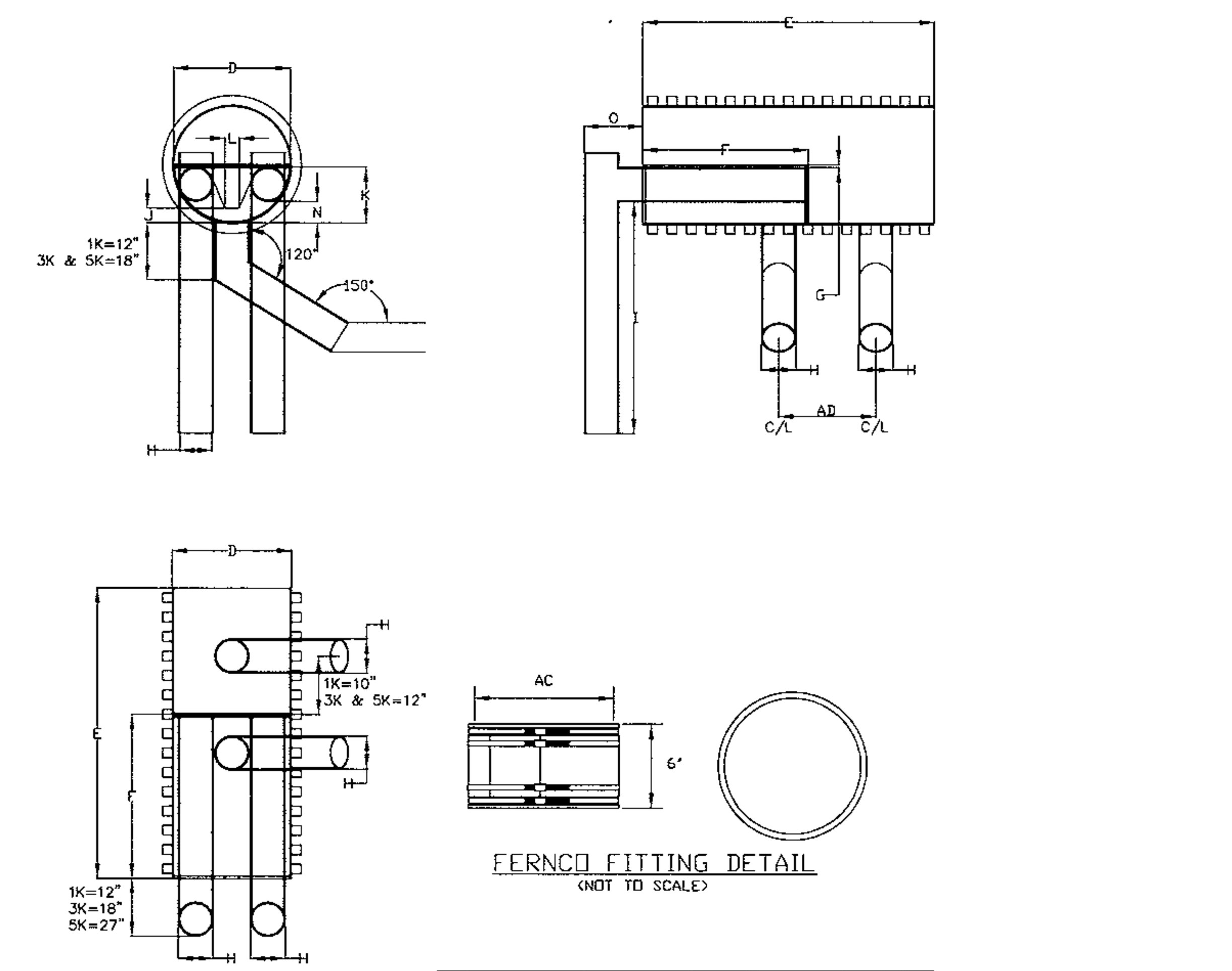
PLAN VIEW



SECTION AA



SECTION BB

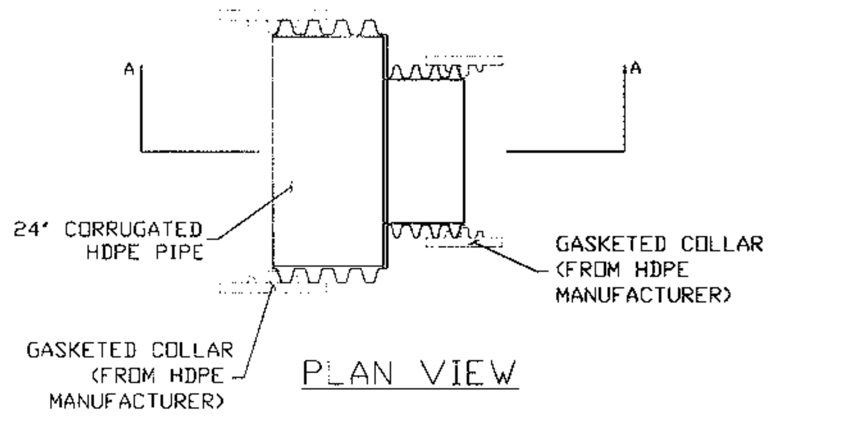


FERNCO FITTING DETAIL
(NOT TO SCALE)

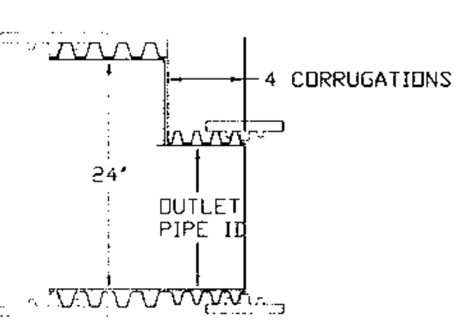
	DISTANCE AC	FERNCO NO.	SHEAR RING
1K	7.10"	1055-66	SR-27
3K	10.60"	1056-1010	SR-39
5K	12.73"	1004-1010	SR-44

HDPE-HDPE REDUCER DETAIL

FOR USE WITH HDPE OUTLET PIPES
NOT TO SCALE



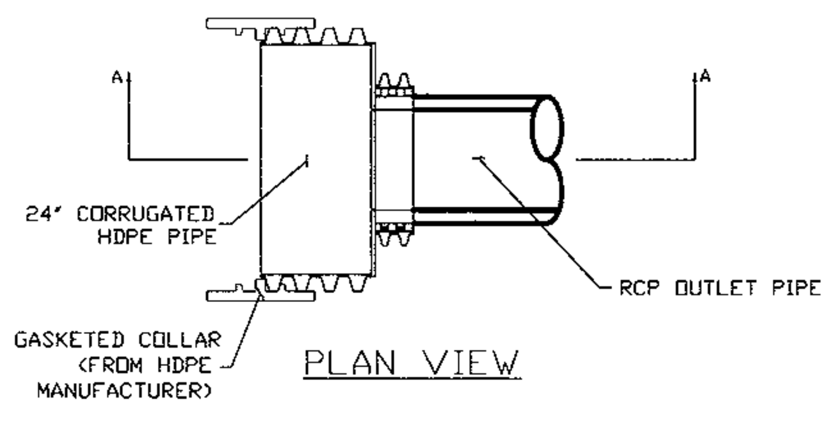
PLAN VIEW



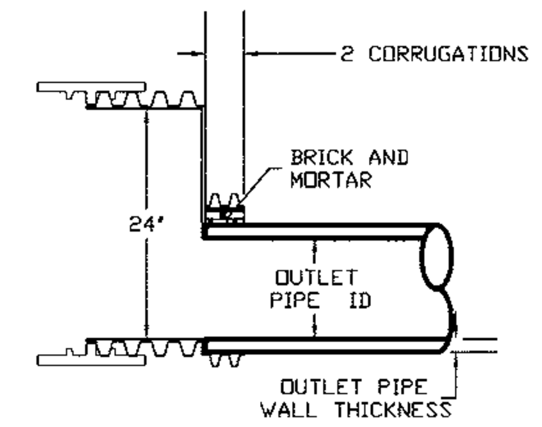
SECTION AA

REDUCER/ADAPTER DETAIL

FOR USE WITH OUTLET PIPES OTHER THAN HDPE
NOT TO SCALE



PLAN VIEW



SECTION AA

GENERAL CONSTRUCTION NOTES

1. ALL WORK MUST BE DONE WITH REGARD FOR THE SAFETY OF THE CONSTRUCTION CREW.

2. ALL WORK AND MATERIALS MUST COMPLY WITH APPLICABLE STATE AND LOCAL REGULATIONS.

3. KNOW THE LOCATION AND DEPTH OF ANY UNDERGROUND UTILITIES BEFORE EXCAVATION BEGINS.

BAYSAVER MAINTENANCE

BAYSAVER SYSTEMS MUST BE INSPECTED AND MAINTAINED PERIODICALLY. INSPECTION IS MADE BY CHECKING THE DEPTH OF SEDIMENT IN EACH MANHOLE WITH A GRADE STICK OR SIMILAR DEVICE. MAINTENANCE IS REQUIRED WHEN THE SEDIMENT DEPTH IN EITHER MANHOLE EXCEEDS 2 FEET. MINIMUM INSPECTION IS REQUIRED TWICE A YEAR TO MAINTAIN OPERATION AND FUNCTION OF BAYSAVER.

MAINTENANCE CONSISTS OF THE FOLLOWING:

A. CONTAMINANT STORAGE MANHOLE

1. REMOVE THE ENTIRE VOLUME OF THE CONTAMINATED WATER BY VACUUM TRUCK.

2. CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE FLUSHING WATER BY VACUUM TRUCK. MAKE CERTAIN MANHOLE IS CLEAN.

B. PRIMARY SEPARATION MANHOLE

1. USING A SUBMERSIBLE PUMP, PUMP THE CLEAN WATER FROM THE CENTER OF THE MANHOLE DIRECTLY INTO THE EMPTY STORAGE MANHOLE UNTIL THE WATER LEVEL FALLS TO 1 FOOT ABOVE THE SEDIMENT LAYER.

2. REMOVE THE SETTLED SEDIMENT AND REMAINING WATER BY VACUUM TRUCK.

3. CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE FLUSHING WATER BY VACUUM TRUCK. MAKE CERTAIN MANHOLE IS CLEAN.

4. CONTAMINATED MATERIAL REMOVED FROM THE MANHOLES MUST BE DISPOSED OF RESPONSIBLY AND LEGALLY BY THE OPERATOR OF THE VACUUM TRUCK.

BAYSAVER INSTALLATION INSTRUCTIONS

1. EXCAVATION MUST PROVIDE ADEQUATE SPACE TO CONNECT INLET AND OUTLET PIPES TO SEPARATOR MANHOLE AND BAYSAVER UNIT. INSTALL PRECAST DROP STRUCTURES ON SOLID GROUND AS VERIFIED BY A GEOTECHNICAL ENGINEER.

2. VERIFY THE SUBGRADE ELEVATION AGAINST THE MANHOLE DIMENSIONS AND CONNECTING STORM DRAIN INVERTS.

3. MAKING SURE THE BASES ARE LEVEL AND THE STORAGE MANHOLE OPENINGS ARE ALIGNED WITH THE SEPARATOR UNIT, INSTALL PRIMARY AND STORAGE MANHOLES. INSTALL RUBBER GASKETS ON BASE UNITS AND COAT WITH LUBRICATING GREASE. INSTALL ADDITIONAL MANHOLE SECTIONS AS REQUIRED. SEAL LIFT HOLES WITH NON-SHRINK GROUT.

4. BACKFILL BASE SECTIONS OF MANHOLES TO INVERT OF STORAGE MANHOLE CONNECTING PIPES. USING APPROVED BACKFILL MATERIAL, BACKFILL AND COMPACT IN 8 INCH LIFTS. BACKFILL AND COMPACTION SHOULD BE MONITORED BY A GEOTECHNICAL ENGINEER.

5. INSTALL BAYSAVER SEPARATOR UNIT AND CONNECTING PIPES. SEAL ALL CONNECTING JOINTS AND INSTALL SEPARATOR UNIT/STORM DRAIN JOINT COLLAR. CUT EXCESS LENGTH OFF CONNECTING PIPES INSIDE STORAGE MANHOLE.

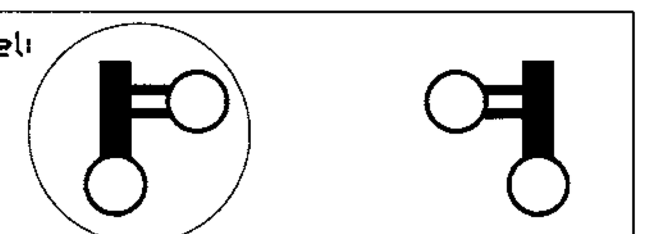
6. BACKFILL SEPARATOR UNIT AND MANHOLES. AREAS NOT ACCESSIBLE TO COMPACTION EQUIPMENT MUST BE BACKFILLED WITH LEAN CONCRETE OR FLOWABLE FILL.

7. INSTALL AND SET MANHOLE COVER GRADE ADJUSTMENT RINGS AS NECESSARY.

8. INSTALL AND SET MANHOLE FRAME AND COVER UNITS.

Project: CVS		Designer: RIEMER MUEGGE	
Address: WATERLOO RD ELKRIDGE, MD. 21075		Contact: CHRIS REID	
		Phone: 410-997-8900	
		Fax: 410-997-9282	
Delivery Date:			
Owner:		Contractor:	
Contact:		Address:	
Address:		Contact:	
		Phone:	
		Fax:	

Separator Unit Model:
1K ☐
3K ■
5K ☐



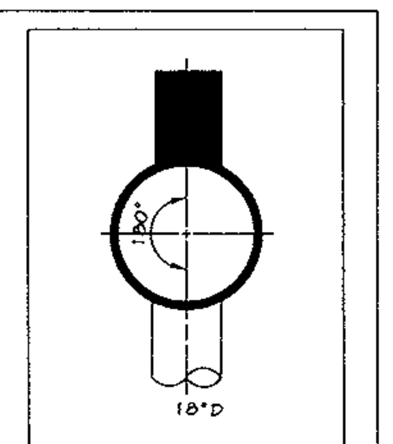
Circle system orientation above

Manhole Specifications:

Primary Manhole Diameter: 60 inches
Storage Manhole Diameter: 60 inches

Floor Elevations:
Primary Manhole 311.55
Storage Manhole 311.55✓

Primary Manhole Inverts:
Separator Unit 319.~~55~~ .28
Inlet Pipe(s) 319.~~92~~ .55



Please show orientation (incliding angle), size and material of inlet pipes above.

Cover Elevations:
Primary Manhole 324.95 ~~315.0~~
Storage Manhole 315.0

WQ-1/WQ-1A

This order can be faxed to Bay Saver, Inc. at (301) 829-3747

SEQUENCE OF CONSTRUCTION AND INSPECTOR'S CHECK-OFF LIST FOR DUAL MANHOLE SEPARATORS

Stage (X = Approval Required)	Developer's/Engineer Approval Initials	Developer's/Engineer Approval Date	Inspector Initials	Inspector Date	Geotechnical Engineer Initials	Geotechnical Engineer Date
1. Pre-Construction Meeting.	X		X		X	
2. Install Manholes and associated storm drainage: a. Obtain approval of subgrade from Geotechnical Engineer. (Subgrade to have a minimum of 95% compaction)					X	
b. Installation of precast base, lower tank and lower piping.	X		X			
c. Backfill and min. 95% compaction around lower tank and lower piping.					X	
d. Installation of precast middle section(s) with separator unit and remaining piping.	X		X			
e. Installation of precast top slab.	X		X			
f. Installation of adjustment rings and frame and cover.	X		X			
g. Installation of flowable fill or concrete backfill.					X	
3. Backfilling operation and compaction.					X	
4. Site is permanently stabilized. Sediment control measures removed and all sediment and debris removed from dual manhole separators.			X			
5. Final inspection.			X			

Baysaver Separator Unit	Baysaver Manhole Sizes (prim. x stor.)	Maximum Treatment (cfs)*1	Maximum Treatment (gpm)*1	Impervious Area (acres)
1K Baysaver Separator	48x48 48x50 48x72 60x60	2.4 2.4 2.4 2.4	1076 1076 1076 1076	1.2 1.4 1.6 1.5
3K Baysaver Separator	60x60 60x72 60x84 72x72	7.2 7.2 7.2 7.2	3231 3231 3231 3231	3.6 4.1 4.6 4.4
5K Baysaver Separator	72x72 72x84 72x96 96x96	11.1 11.1 11.1 11.1	4981 4981 4981 4981	5.5 6.5 7.5 8.0

NOTE:

BAYSAVERS ARE TO BE INSTALLED WITH THE STORM DRAIN SYSTEM AND WILL FUNCTION AS SECONDARY SEDIMENT CONTROL DEVICES.

UPON COMPLETION OF SITE STABILIZATION, EACH BAYSAVER SYSTEM SHALL BE FLUSHED CLEAN & THE MANHOLES CLEANED OUT AND REFILLED WITH CLEAN WATER.

NOTE: DIMENSIONAL SHOP DRAWINGS ARE TO BE APPROVED BY THE DESIGN ENGINEER

BAYSAVER SYSTEM DIMENSIONS

	DESCRIPTION	1K SYSTEM	3K SYSTEM	5K SYSTEM
	SEPARATOR MANHOLE DIMENSIONS			
A	PRIMARY MANHOLE DIAMETER	48"	60"	72"
B	MANHOLE DEPTH BELOW OUTLET	8' - 0"	8' - 0"	8' - 0"
C	MINIMUM FLUID DEPTH	8' - 3"	8' - 4 1/2"	8' - 6"
	STANDARD SEPARATOR UNIT DIMENSIONS			
D	SEPARATOR UNIT ID	24"	36"	48"
E	SEPARATOR UNIT LENGTH	60"	78.2"	75.4"
F	BYPASS PLATE LENGTH	34"	45"	45"
G	WEIR/BYPASS PLATE THICKNESS	3/4"	3/4"	3/4"
H	ELBOW AND CONNECTING PIPE OD	7.125"	10.75"	12.75"
I	ELBOW LENGTH	48"	48"	48"
J	WEIR HEIGHT ABOVE INVERT	3"	4"	6"
K	BYPASS PLATE HEIGHT ABOVE INVERT	12"	18"	24"
L	WIDTH OF WEIR AT BASE	3"	4 1/2"	6"
M	OUTLET PIPE DIAMETER	M	M	M
N	ELBOW INVERT HEIGHT ABOVE UNIT INVERT	4 1/2"	7 1/2"	11"
O	ELBOW PIPE OVERHANG	12"	18"	24"
	STORAGE MANHOLE DIMENSIONS			
P	STORAGE MANHOLE DIAMETER	48"	60"	72"
Q	MANHOLE DEPTH BELOW INLET/OUTLET	48"	48"	48"
R	FLUID DEPTH	8' - 0"	8' - 0"	8' - 0"
S	TOTAL STORAGE VOLUME	200 CF	300 CF	450 CF
	SYSTEM DIMENSIONS AND ELEVATIONS			
T	SEPARATOR MANHOLE COVER ELEVATION	T	T	T
U	STORAGE MANHOLE COVER ELEVATION	U	U	U
V	SEPARATOR MANHOLE FLOOR ELEVATION	V	V	V
W	STORAGE MANHOLE FLOOR ELEVATION	W	W	W
X	INLET PIPE ID AND MATERIAL	X1 X2	X1 X2	X1 X2
Y	INLET PIPE INVERT	Y1 Y2	Y1 Y2	Y1 Y2
Z	SEPARATOR UNIT INVERT	Z	Z	Z
AA	OUTLET PIPE ID AND MATERIAL	AA	AA	AA
AB	ELBOW INVERT ELEVATION	AB	AB	AB
AC	CONNECTING PIPE INVERT ELEVATION	AC	AC	AC
AD	CONNECTION PIPE SPACING	20"	24"	24"
AE	STORAGE MANHOLE SIDE OFFSET	72 ± 6"	72 ± 6"	72 ± 6"
AF	STORAGE MANHOLE DOWNSTREAM OFFSET	23"	31"	25"

AS-BUILT CERTIFICATE

Christopher J. Reid 9.12.00
CHRISTOPHER J. REID # 19949 DATE

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

Diane Matuszak M.D. / 11/9/99
COUNTY HEALTH OFFICER M. DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

11/15/99
DIRECTOR BB DATE

11/4/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Cindy Hamilton 11/12/99
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

OWNER
AUDREY OWENS ETAL
7533 GLENEAGLE DR.
JESSUP, MD 20794
(410) 799-4655

OWNER
OM HOSPITALITY MANAGEMENT, INC.
6251 WASHINGTON BLVD.
ELKRIDGE, MD 21075
(410) 379-3095

DEVELOPER
ASTON PROPERTIES
6525 MORRISON BLVD., SUITE 300
CHARLOTTE, NC 28211
(704) 366-7337

PROJECT
CVS
RETAIL STORE

AREA
Parcels 259 & 260
Tax Map 37 Block 14, 20 Zoned B-1, B-2
6th Election District
Howard County, Maryland

TITLE
WATER QUALITY
NOTES AND DETAILS

RIEMER MUEGGE & ASSOCIATES INC
ENGINEERING ● ENVIRONMENTAL SERVICES ● PLANNING ● SURVEYING
8818 Centre Park Drive, Columbia, MD 21045
tel 410.997.8900 fax 410.997.9282

DATE
STATE OF MARYLAND ARTHUR E. MUEGGE III NO. 8707 REGISTERED PROFESSIONAL ENGINEER
ARTHUR E. MUEGGE #8707

DESIGNED BY : C.J.R.
DRAWN BY : D.A.M.
PROJECT NO : 98313 SDP7.DWG
DATE : OCTOBER 13, 1999
SCALE : AS SHOWN
DRAWING NO. 7 OF 8

AS-BUILT 9/11/00 SDP-99-123

M:\PROJECT\98313\SDP7.DWG Fri Aug 06 12:21:14 1999 RIEMER MUEGGE & ASSOCIATES, INC.

SCHEDULE 'B' - PARKING LOT INTERNAL LANDSCAPING	
PARKING LOT	1
NUMBER OF PARKING SPACES	52
NUMBER OF SHADE TREES/ISLANDS* REQUIRED (1/20 SPACES)	3
NUMBER OF TREES PROVIDED SHADE TREES SHRUBS (10:1 SUBSTITUTION)	 2 20
NUMBER OF ISLANDS REQUIRED	3
NUMBER OF ISLANDS PROVIDED	3

* 200 SF PLANTING AREA / ISLAND

SUBSTITUTION NOTES:

(20) EVERGREEN SHRUBS WERE SUBSTITUTED FOR (2) SHADE TREE

SCHEDULE 'A' - PERIMETER LANDSCAPE EDGE							
	ADJACENT TO ROADWAYS						
PERIMETER	1	* 2	3	4	5	6	7
LANDSCAPE TYPE	B	E	B	E	C	C	C
LINEAR FEET OF ROADWAY FRONTAGE/ PERIMETER	± 165'	± 300'	± 188'	± 90'	± 140'	± 280'	± 25'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	YES 300' @ 3' H x2 WALLS	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	@1/50' = 4 @1/40' = 5 -	@1/60' = 5 OR @1/10' = 30	@1/50' = 4 @1/40' = 5 -	@1/40' = 2 - @1/4' = 23	@1/40' = 4 @1/20' = 7 -	@1/40' = 7 @1/20' = 14 -	@1/40' = 1 @1/20' = 1 -
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES SMALL FLOWERING TREES SHRUBS	5 - 3 -	- - - 60	3 - 4 22	2 - - 23	4 - 3 40	8 6 - 60	- - - 20

NOTES:

* "WALLS, HEDGES AND FENCES MAY BE CREDITED TOWARDS MEEETING 100% OF THE REQUIRED LANDSCAPE PLANTING." [PAGE 24 OF THE HOWARD COUNTY LANDSCAPE MANUAL DATED JANUARY 4, 1998

AS-BUILT CERTIFICATE

CHRISTOPHER J. REID # 19949 — 9.12.00 DATE

SUBSTITUTION NOTES:

PERIMETER 1:
(3) FLOWERING TREES WERE SUBSTITUTED FOR (3) EVERGREEN TREES
(1) SHADE TREE WAS SUBSTITUTED FOR (2) EVERGREEN TREES

PERIMETER 3:
(4) FLOWERING TREES WERE SUBSTITUTED FOR (4) EVERGREEN TREES
(10) SHRUBS WERE SUBSTITUTED FOR (1) SHADE TREE
(12) SHRUBS WERE SUBSTITUTED FOR (1) EVERGREEN TREE

PERIMETER 5:
(40) SHRUBS WERE SUBSTITUTED FOR (4) EVERGREEN TREES

PERIMETER 6:
(1) SHADE TREE WAS SUBSTITUTED FOR (2) EVERGREEN TREES
(60) SHRUBS WERE SUBSTITUTED FOR (6) EVERGREEN TREES

PERIMETER 7:
(10) SHRUBS WERE SUBSTITUTED FOR (1) SHADE TREE
(10) SHRUBS WERE SUBSTITUTED FOR (1) EVERGREEN TREE

MARYLAND ROUTE 108
MARYLAND STATE HIGHWAY
HO. CO. MINOR ARTERIAL

OLD WATERLOO ROAD
HO. CO. MAJOR COLLECTOR

SUMMER CLOUD WAY

DEEP RUN PARKWAY

PARCEL B
FOOD LION
SUBDIVISION
PLAT No. 13014

TAX MAP 37
PARCEL 262
PROPERTY OF
G. & A. INC.
L. 4028, F. 84
ZONED B-2

PROPOSED CVS
F.F.= 329.0
10,125 SF

PARCEL 260

PARCEL 259

PERIMETER 1
±165'

PERIMETER 2
±300'

PERIMETER 3
±188'

PERIMETER 4
±90'

PERIMETER 5
±140'

PERIMETER 6
±315'

PERIMETER 7
±25'

PARKING LOT LANDSCAPE ISLAND

PARKING LOT LANDSCAPE ISLANDS

NOTE: PERMISSION TO BE OBTAINED FOR OFFSITE GRADING

E 1370500 N 556000

E 1371000 N 555900

E 1371000 N 556000

PARKING LOT LANDSCAPE REQUIREMENT

PERIMETER LANDSCAPE REQUIREMENT

PLANTING LEGEND

PROP. SHADE TREE	
PROP. ORNAMENTAL TREE	
PROP. EVERGREEN TREE	
PROP. EVERGREEN SHRUB	
PROP. DECIDUOUS SHRUB	
EXISTING SHADE TREE	
PARKING LOT LANDSCAPE ISLAND	
EXISTING PLANTS	

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

PLANT LIST						
SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT		
AR	22	Acer rubrum 'October Glory' October Glory Red Maple	2½"–3"CAL	B&B		
ZS	* 2	Zelkova serrata 'Green Vase' Green Vase Zelkova	2½"–3"CAL	B&B		
CL	6	Cupressocyparis leyandii Leyland Cypress	5' – 6' Ht.	B&B		
PY	4	Prunus yedonensis / Yoshino Cherry	1½"–2"CAL	B&B		
PK	6	Prunus serrulata 'Kwanzan' / Kwanzan Cherry	1½"–2"CAL	B&B		
IB	* 145	Ilex cornuta 'Burfordii Nana' / Dwarf Burford Holly	2½'–3'HT.	B&B		
JH	* 20	Juniperus Horiz. 'Plumusa Compacta' Compact Andorra Juniper	18"–24" SP.	CONT		
SJ	70	Spiraea japonica 'Snowmound' Snowmound Spirea	2'–2½'HT.	CONT		
VR	10	Viburnum rhytidophyllum Leatherleaf Viburnum	2½'– 3' HT.	B&B		

PLANT LIST NOTES:
*1) SURETY AMOUNT IS BASED ON REQUIRED LANDSCAPE MATERIAL ONLY
2) FOR LANDSCAPE PLANTING DETAILS, SEE SHEET 6 OF 8
3) SHOW IRRIGATION SYSTEM WITH SLEEVES, SEPARATE WATER METER WITH BACKFLOW PREVENTER, HEADS, AND MANUAL OVERRIDE STATION.

NOTES:

1) A LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE TO SECTION 16.124 OF THE LANDSCAPE MANUAL FOR THIS SITE.
2) "FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING MUST BE POSTED AS PART OF THE DEVELOPERS AGREEMENT IN THE AMOUNT OF $14,490.00.
3) THIS PLAN IS FOR LANDSCAPING PURPOSES ONLY.
4) CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.

DEVELOPER'S/BUILDER'S CERTIFICATE:

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

NAME — 10.7.99 DATE

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

COUNTY HEALTH OFFICER — 11/9/99 DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — 11/15/99 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 11/4/99 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 11/12/99 DATE

DATE	NO.	REVISION

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AREA
Parcels 259 & 260
Tax Map 37 Block 14, 20 Zoned B-1, B-2
6th Election District
Howard County, Maryland

TITLE
LANDSCAPE PLAN

RIEMER MUEGGE & ASSOCIATES INC
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
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8.6.99 DATE

DESIGNED BY : D.T.D.
DRAWN BY : A.L.
PROJECT NO : 98313 LSCP.DWG
DATE : OCTOBER 13, 1999
SCALE : 1"= 30'
DRAWING NO. 8 OF 8

DAVID T. DOWS #830

AS-BUILT 9/11/00 SDP-99-123

M:\PROJECT\98313\LSCP.DWG Fri Aug 06 13:12:20 1999 RIEMER MUEGGE & ASSOCIATES, INC.